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Birds

THE AVICULTURAL MAGAZINE

BEING THE JOURNAL OF THE
AVICULTURAL SOCIETY FOR
THE STUDY OF BRITISH AND
FOREIGN BIRDS IN FREEDOM
AND IN CAPTIVITY

EDITED BY

Miss E. F. CHAWNER

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IN FREEDOM & CAPTIVITY

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- CHAWNER, Miss, F.Z.S. ; The White House, Leckford, Stockbridge, Hants. (July, 1899.) (*Editor.*)
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- DALRYMPLE, Mrs. A. M. ; address unknown.
- DALZIEL, James ; 1491 Foothill Boulevard, San Leandro, California, U.S.A. (Nov., 1936.)
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- DEBONO, P. P. Prof., M.D., F.R.C.S.(Eng.); Villa Refalo, H" Attard, Malta. (June, 1930.)
- DECOUX, A.; G ry-pr s Aix, Hte. Vienne, France. (April, 1917.)
- DELACOUR, JEAN, F.Z.S.; Cl res, Seine Inf rieure, France. (April, 1916.)
- DENLEY, C. F.; Winden, Brookville Pike, Rockville, Md., U.S.A. (Jan., 1927.)
- DENNIS, MRS. CYRIL; Oakley Hall, Market Drayton, Salop. (June, 1920.)
- DENNIS, MRS. H. E.; Holme Manor, Pulborough, Sussex. (March, 1903.)
- DENNIS, MRS. STANLEY; Littlecourt Farm, Hambrook, Chichester. (June 1935.)
- DENNY, MRS. HENRY, C.B.E.; Staplefield Place, Staplefield, Sussex. (May, 1924.)
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- EVALD, Dr.; Sonderborg, Denmark. (March, 1935.)

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- FARQUHAR, Mrs. ; The Cottage, Gaddesby, Leicestershire. (Dec., 1935.)
- FENTUM, F. C. ; 76-8 Hoppers Road, Winchmore Hill, N. 21. (June, 1937.)
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- FISHER, JAMES ; c/o Zoological Society, Regent's Park, N.W. 8. (Sept., 1937.)
- FLOYD, J. F. M. ; High Bridge Mill, Cuckfield, Sussex. (Jan., 1935.)
- FOOKS, F. E. ; Directeur, Parc Zoologique de Clères, Clères, Seine Inférieure, France. (Jan. 1926.)
- FOOKS, H. A. ; The Hermitage, 4 Alipare Road, Calcutta, India. (Jan., 1932.)
- FOSTER, H. F. B. ; Faskally, Pitlochry, Perthshire. (April, 1937.)
- FRAYNE, RALPH ; 28 Bramworth Road, Hexthorpe, Doncaster. (May, 1933.)
- FREIDLANDER, Dr. H. R. ; 47 Wickham Road, Beckenham, Kent. (July, 1936.)
- FROST, WILFRED ; c/o Zoological Society, Regent's Park, N.W. 8. (July, 1908.)
- FROSTICK, JOHN ; 303 High Road, Streatham Common, S.W. 16. (April, 1933.)
- FURNER, A. C. ; Oakdene, Whitaker Road, Derby. (Oct., 1929.)
- GARCKE, Mrs. C. ; Ditton House, Pinkney's Green, East Berkshire. (June, 1916.)
- GARDNER, ERIC ; (Executive Engineer) General Offices B.B. & C.I. Railway, Churchgate, Bombay, India. (March, 1935.)
- GARGINI, G. ; The Bull's Head Hotel, Aylesbury, Bucks. (June, 1933.)
- GARRETT, M. R. ; District Forester, Smithton, Tasmania. (June, 1934.)
- GARRETT, ROBERT ; Lannevan, Knock, Belfast. (April, 1933.)
- GARVEY, F. W. ; "Melbriar," Garstang Road, West Poulton, Blackpool. (Aug., 1937.)
- GETGOOD, G. ; Beverley Aviaries, 534 High Road, Chiswick. (Sept., 1937.)
- GHIGI, il Prof. ALESSANDRO ; Via D'Azeglio, Bologna, Italy.
- GILMAN, L. E. ; Snargate, Woodmansterne Road, Purley, Surrey. (Jan., 1936.)
- GLADSTONE, HUGH, M.A., F.Z.S., F.R.S.E., F.S.A.Scot. ; Capenoch, Thornhill, Dumfriesshire. (Dec., 1932.)
- GLEDHILL, HAROLD ; Mayfield, Argomeols Road, Freshfield, near Liverpool. (March, 1934.)
- GLENISTER, A. G., F.Z.S., M.B.O.U. ; The Barn House, East Blatchington, Seaford. (June, 1928.)

List of Members

- GLOVER, PERCY H., F.Z.S.; Broadlands, Fareham, Hants. (June, 1931.)
- GODDARD, H. E.; Lerwick, Bannerdown, Batheaster, Somerset. (Feb., 1899.)
- GODDARD, Mrs.; Fernham House, Faringdon, Berks. (Feb., 1923.)
- GOLDER, H. G., F.Z.S.; Hon. Secretary and Treasurer Norwich Alliance All England C.B.d., 37 Crown Road, Norwich. (June, 1931.)
- GOODALL, A. W.; 29 Weston Crescent, Runcorn, Cheshire. (March, 1933.)
- * GOSSE, Mrs. JAMES; 9 Park Terrace, Park Side, South Australia. (July, 1923.)
- GRANT, FRANK; Parklands, Stoughton Lane, Evington, Leicester. (Feb., 1935.)
- GRANT-IVES, Miss J. M.; Hon. Secretary Ornamental Pheasant Society, Wellesbourne, Warwick. (Sept., 1935.)
- GRAY, HENRY, M.R.C.V.S.; 85 Earls Court Road, W. 8. (June, 1906.)
- GROVES, Hon. Mrs. MCGAREL; Battramsley House, Lymington, Hants. (March, 1917.)
- GUBBAY, Mrs. MAURICE; 30 Hill Street, Berkeley Square, W. 1. (Feb., 1928.)
- GUILD, EASTHAM; P.O. Box 56, Papeete, Tahiti. (May, 1936.)
- GULBENKIAN, C. S.; 51 Avenue d'Jéna, Paris xvi^e Paris. (Dec., 1908.)
- GURNEY, Miss DIANA; North Runciton Hall, King's Lynn. (July, 1927.)
-
- HACHISUKA, The Marquess; Mita Shiba, Tokyo, Japan. (July, 1932.)
- HAINES, Dr. J. E.; Elmdon, London Road, Guildford. (April, 1935.)
- HALL, F.; Dalkeith, 42 Chantry Road, Moseley, Birmingham. (March, 1934.)
- HALL, T. WALTER; 6 Gladstone Road, Sheffield. (Nov., 1926.)
- HALLORAN, Dr. GARNET R.; Harley, 143 Macquarie Street, Sydney, N.S.W., Australia. (April, 1935.)
- HALVERSON, A. W.; 5705 West Erie Street, Chicago, Ill., U.S.A. (April, 1937.)
- HAMERTON, Col. A. E., C.M.G., D.S.O.; 1 Park Village West, Regent's Park, N.W. 1. (Dec., 1930.)
- HAMPE, ALEX.; c/o Mrs. Hillmann, Luisenallee, 8, Koenigsberg 1, Preussen, Germany. (Jan., 1927.)
- HAMPE, HELMUT; Braunschweig, Steintorwall, Nr. 11, Germany. (March, 1935.)
- HANKEY, ALGERNON A., F.Z.S.; 71 Lissenden Mansions, Highgate Road, N.W. 5. (June, 1923.)
- HANDLEY, W. H.; Kinmundy, Crofts Bank Road, Urmston, Manchester. (Oct., 1937.)
- HAPPE, PAUL; 44 Avenue Eng Plasky, Bruxelles, Belgium. (Aug., 1935.)
- HARMAN, Miss KNOBEL, F.Z.S.; "Lindeth," Peaslake, Surrey. (Sept., 1928.)
- HARRIS, Charles H.; 92 West End Lane, West Hampstead, N.W. 6. (Jan., 1937.)
- HARVEY, P. T.; "Deanscroft," South Darenth, Nr. Dartford, Kent. (Nov., 1926.)
- HASTINGS, P. H.; 4 and 6 Fratton Road, Portsmouth. (March, 1930.)
- HAWKE, The Hon. Mary; Mill Lands, Henfield, Sussex. (Rejoined.)
- HEAL, C. H.; Stanley Villa, Paulton, Somerset. (Sept., 1932.)
- HEBB, THOMAS; Croft House, Old Aylestone, Leicester. (April, 1914.)

- HEDDLE, MAURICE J. ; "Shanklin," 33 Park Road, Southend-on-Sea. (April, 1936.)
- HENDERSON, Miss OONA ; Greystones, St. Mawes, Cornwall. (Sept., 1934.)
- HEY, G. L., M.A. ; 87 Farley Hill, Luton, Beds.
- HIGHAM, WALTER E., F.R.P.S., F.R.G.S., F.Z.S., M.B.O.U. ; The Oaks, Clayton-le-Dale, near Blackburn, Lancs. (Jan., 1934.)
- HILDICK-SMITH, Mrs. K. ; 3 St. Miniver Road, Bedford. (March, 1937.)
- HIRST, ALBERT ; 10 Talbot Avenue, Egerton, Huddersfield. (July, 1923.)
- HIRST, ARNOLD ; P.O. Box 262 DD, Sydney, N.S.W., Australia. (April, 1929.)
- HIRST, ROBERT S. ; Swincliffe House, Gomersal, near Leeds. (Rejoined.)
- HOLLAS, Mrs. K. E. ; Red Scar, Grimsargh, near Preston. (Oct., 1922.)
- * HOLLOND, Miss GLADYS M. B. ; 5 Norfolk Crescent, Hyde Park, W. 2. (March, 1930.)
- HOLT, Miss ESTHER ; Axholme, Noctorum, Birkenhead, Cheshire. (Jan., 1934.)
- HONE, CAPT. T. N. ; Highways, Bellingdon, Chesham, Bucks. (Nov. 1927.)
- HOOK, V. J. ; Flat Noll, Darbhanga Mansions, Carmichael Road, Cumballa Hill, Bombay, India. (Sept., 1935.)
- HOPKINS, W. E., F.Z.S. ; 6 Queen Street, Scarborough. (July, 1933.)
- HOPKINSON, EMILIUS, C.M.G., M.A., M.B.Oxon., D.S.O., F.Z.S. ; Wynstay, Balcombe, Sussex. (Oct., 1906.)
- HORNE, DOUGLAS PERCY ; Pinefield, Church Road, Addlestone, Surrey. (Sept., 1928.)
- HORNER, Miss D. ; Riccall, York. (Aug., 1931.)
- HORSFORD, D. M. ; Bosvathick, Penryn, Cornwall. (Aug., 1922.)
- HOUSDEN, Major E. F., M.C., T.D. ; Hillside, Harrow-on-the-Hill, N. (Jan. 1934.)
- HOUSDEN, JAMES B. ; Brooklyn, 31 Cator Road, Sydenham, S.E. 26. (*Orig. Mem.*)
- HOUSDEN, Dr. LESLIE ; Caldecotts, Church Square, Basingstoke, Hants. (March, 1933.)
- HUCKLE, Mrs. K. E. ; The Bungalow, 14 Park Lane, Salisbury. (Jan., 1928.)
- HUDSON, Col. N. ; 54 Hardy Road, Blackheath, S.E. 3. (Nov., 1935.)
- HUMPHRIES, WALTER JOHN ; 32 Cedric Road, Crumpsall, Manchester, 8. (Feb., 1931.)
- HUTCHINSON, Miss ALICE ; address unknown. (Aug., 1907.)
- HUTH, Mrs. MURIEL ; 243 Goldhurst Terrace, N.W. 6. (Feb., 1935.)
- IMPARATI, Dr. Prof. EDOARDO ; Ravenna, Italy. (Jan., 1932.)
- IRVINE, W. J. ; 36 Ann Street, Belfast. (June, 1926.)
- IRVINE, Mrs. CHRISTINE ; Blakeway, Allport Road, Bromborough, Cheshire. (March, 1930.)
- ISENBERG, A. H. ; 647 Runnymede Street East, Palo Alto, California, U.S.A. (Aug., 1926.)
- JABOUILLE, M. P. ; Clères, Seine Inférieure, France. (Feb., 1927.)
- JAMES, RICHARD ; 346 Eden Park Avenue, Beckenham, Kent. (March, 1937.)
- JARVIS, Miss I. F. ; The Old Manor, Salisbury. (Aug., 1930.)
- JEFFERSON, Miss D. D. ; Barethorn, Greenway Road, Chelston, Torquay, S. Devon., (May, 1932.)

- JENNISON, GEORGE, M.A., F.Z.S. ; Barwick Lodge, Disley, Cheshire. (April, 1918.)
- JERVIS, Hon. Mrs. ; Pitminster Lodge, Taunton, Somerset. (Feb., 1936.)
- JOHNSON, F., F.Z.S. ; Downham Tavern, Bromley, Kent. (Jan., 1933.)
- JOHNSTON, ROBERT PERCY ; West House, Wigton, Cumberland. (March, 1925.)
- JONES, F. T. ; Peover Eye, Lower Peover, near Knutsford, Cheshire. (Oct., 1933.)
- JONES, S. B. ; Plemont, Higher Road, Halewood, Liverpool. (Sept., 1934.)
- JONES, W. A. ; 54 Stockwell Park Road, S.W. 9. (Feb., 1933.)
- KANGIESER, HENRY F., jr. ; Route 2, Box 16, Menlo Oaks Drive, Menlo Park, Calif., U.S.A. (May, 1933.)
- KEATOR, BEVERLEY, R.F.D. ; 2 Westport, Conn., U.S.A. (June, 1924.)
- KEMP, ROBERT ; 5 Rose Hill, Lostwithiel, Cornwall. (March, 1926.)
- KERR, J. ERNEST ; Harviestoun, Dollar, Scotland. (March, 1927.)
- KEWLEY, Mrs. M. A. ; Old Court House, Whitechurch, Aylesbury, Bucks. (Sept., 1910.)
- KNIGHT, RONALD D. ; 144 Knighton Church Road, Leicester. (March, 1932.)
- KNOBEL, Miss E. MAUD, F.Z.S., M.B.O.U. ; 86 Regent's Park Road, N.W. 1. (Aug., 1916.) (*Hon. Mem. Hon. Secretary and Treasurer.*)
- KRULIS-RANDA, Dr. Otakar ; Prague 2, Lazarska 7. (May, 1936.)
- KUNTZ, P. ; 289 Edmonton Street, Winnipeg, Manitoba, Canada. (May, 1930.)
- LAILAY, J. C. ; Lindores, Fife, Scotland. (April, 1929.)
- LAKE, GEORGE D. ; Audrey, Burghfield Common, Mortimer, Berks. (Sept., 1937.)
- LAMBERT, Miss Lesley Douglas ; Beeston Hill, Leeds. (Jan., 1937.)
- LAMBERT, J. ; Nawton, Yorkshire. (March, 1936.)
- LAMBERT, PAUL ; Nawton, Yorkshire. (Sept., 1929.)
- LANGHAM, SIR CHARLES, Bart. ; Tempo Manor, Co. Fermanagh, Ireland. (July, 1932.)
- LAUDER, P. ; Ebor, Setley, Brockenhurst, Hants.
- LAW, Dr. SATYA CHURN, F.Z.S., M.B.O.U., M.A., B.L., Ph.D. ; 50 Kailas Bose Street, Calcutta. (1919.)
- LAX, J. M. S. ; Southfield, Crook, Co. Durham. (Jan., 1930.)
- LEACH, C. F. ; Vale Lodge, Leatherhead, Surrey. (June, 1914.)
- LEE-BOOKER, J. R. ; Chingozzi Estate, P.O. Mlanje, Nyasaland. (Dec., 1935.)
- LEGENDRE, M. ; 25 Rue La Condamine, 17^e, Paris. (June, 1928.)
- LEIGH-SMITH, Miss N. ; Crotestei, Headley Down, Bordon, Hants. (Jan., 1934.)
- LONDON, ALAN, M.B., B.S., F.R.C.S., F.R.A.C.S. ; 163 North Terrace, Adelaide, Australia. (Feb., 1937.)
- LESLIE, CLEMENT M. ; 22 Meadowside, Dundee. (Jan., 1932.)
- LESSE, MAURICE DE ; La Nartelle par Sainte Maxime, Var, France. (Jan., 1933.)
- LEWIS, E. H. ; Waikiki Bird Park, Honolulu, Hawaii, U.S.A. (Sept., 1928.)

- LEWIS, J. SPEDAN, F.Z.S.; Leckford Abbess, Stockbridge, Hants. (Sept., 1924.)
- LIBRARY INTERNATIONAL INSTITUT D'AGRICULTURE; Villa Umberto I, Rome, 10.
- LILFORD, The Lady; Lilford Hall, Oundle, Northants. (Jan., 1898.)
- LINDSAY, Mrs. Edwin A.; 146 Harley Street, W. 1. (July, 1935.)
- LODGE, GEORGE E., F.Z.S., Hawkhouse, Park Road, Camberley, Surrey. (May, 1923.)
- LOSKEY, R. F.; Chiclayo, Perú. (Jan., 1930.)
- LOUWMAN, P. W.; 4 Teylingerhorstlaan, Wassenaar, Holland. (Aug., 1936.)
- LOVELACE, The Countess of; Wentworth House, Chelsea Embankment, S.W. 3. (May, 1906.)
- LOWE, Rev. J. R.; The Vicarage, Coln St. Aldwyn, Fairford, Glos. (June, 1927.)
- LUPTON, Miss E. M.; Beechwood, Elmete Lane, Roundhay, Leeds. (Aug., 1933.)
- LYON, Capt. the Hon. MICHAEL; Glamis Castle, Glamis, Forfarshire. (May, 1927.)
- MCCANCE, DAVID; Strand Town, Belfast. (July, 1932.)
- MCCLURE, DAVID O'LOAN; 3 Knutsford Drive, Cliftonville, Belfast. (Jan., 1936.)
- MCCORQUODALE, Mrs.; Cound Hall, Shrewsbury. (Jan., 1920.)
- McLINTOCK, Miss M. H.; The Grove, Catton Grove Road, Norwich. (July, 1927.)
- McMILLAN, Dr. A.; New Romney, Kent. (March, 1930.)
- McMILLAN, ERNEST; 14 Donegall Square West, Belfast. (Feb., 1937.)
- McWAYNE, CHARLES A.; P.O. Box 122, Honolulu, Hawaii, U.S.A. (June, 1937.)
- MACK, WILLIAM; 5 Furnival Chambers, St. George's Terrace, Perth, Western Australia. (Feb., 1931.)
- MACKIE, PHILIP C.; Tudor Cottage, Orville Gardens, Headingley, Leeds. (Jan., 1926.)
- MACKLIN, C. H., M.R.C.S., L.R.C.P., F.Z.S.; 23 Church Street, Amptill, Beds. (May, 1923.)
- MAIRAUX, E. (Ingénieur Agronome I.A.G.); 41 Rue de la Ruche, Bruxelles, Belgium. (July, 1929.)
- MALONE, Mrs. M. L'ESTRANGE; West Lodge, Malton, Yorks. (Dec., 1902.)
- MALISOUX, Ivan; Beez, Namur, Belgium. (Feb., 1936.)
- MANCHESTER PUBLIC LIBRARIES; Charles Nowell, F.L.A. (Chief Librarian), Central Library, St. Peter's Square, Manchester, 2. (July, 1913.)
- MANFIELD, H.; c/o Zoological Gardens, Adelaide, South Australia. (June, 1937.)
- MARESI, POMPEO M.; 36 W. 9 Reimer Road, Scarsdale, New York, N.Y., U.S.A. (June, 1924.)
- MARSDEN, J. W., F.Z.S.; Greylands, Lower Heysham, Lancs. (March, 1914.)
- MARSH, E. G.; Stoke Bishop, Drake's Avenue, Exmouth. (Sept., 1935.)
- MARSHALL, L. F.; 65 Fitzroy Avenue, Harborne, Birmingham 17. (Sept., 1937.)
- MARTEN, L. H., O.B.E., F.Z.S.; Tilton, near Battle, Sussex. (June, 1930.)

- MARTIN, A. ; The Nash, Kempsey, near Worcester. (Oct., 1930.)
- MARTIN, H. C. ; Las Cãnas, 44b Coper's Cope Road, Beckenham, Kent. (Jan., 1935.)
- MASON, Miss EVA INGLIS ; Peppercorn Cottage, Burton, Christchurch, Hants. (Aug., 1934.)
- MASURE, RALF H. ; 5417 Ingleside Avenue, Chicago, Ill., U.S.A. (Aug., 1935.)
- MATTHEWS, Mrs. W. M. ; Sarsdenfield, Camberley, Surrey. (May, 1935.)
- MAXWELL, C. T. ; 1 Sharderoft Avenue, Herne Hill, S.E. 24. (Dec., 1908.)
- MAXWELL, P. H. ; Ebberley Hill, St. Giles, near Torrington, N. Devon. (Oct., 1929.)
- MAXWELL-JACKSON, Miss M. ; Percy House, Scotton, Knaresborough, Yorks. (Jan., 1913.)
- MAYER, F. W. SHAW ; Wulfruna, 88 Concord Road, Homebush, Sydney, Australia. (Aug., 1922.)
- MAYNARD, C. GORDON ; Springfield, Northaw, Potters Bar, Herts. (Aug., 1928.)
- MEESER, F. C. S. ; P.O. Box 4993, 80 Commission Street, Johannesburg, South Africa. (July, 1937.)
- MERCK, Dr. WOLFGANG ; Johnsallee, 42, Hamburg, 13. Germany. (March, 1935.)
- MIDDLEMOST, H. EDWIN ; Foxholme, Birchencliffe, Huddersfield. (Dec., 1934.)
- MILLER, S. P. ; Northend, Gloucester Road, Teddington.
- MILLIGAN, H. ; Upper Manor Farm, Leckford, Stockbridge, Hants. (March, 1937.)
- MILTON, STANLEY F. ; 75 Portland Avenue, Gravesend, Kent. (March, 1937.)
- MITCHELL, Mrs. ; Postlip Hall, Winchcombe, Glos. (May, 1933.)
- MITCHELL, Mrs. E. W. ; Rosetiles, Le Torquet (Pas de Calais), France. (Dec., 1933.)
- MOODY, A. F. ; Lilford, Barnwell, Peterborough. (July, 1926.)
- MOORE, ROBERT T. ; RR. No. 1, Box 28a, Pasadena, California, U.S.A. (July, 1928.)
- MORRIS, Dr. G. V. ; Oakeswell Hall, Wednesbury, Staffordshire. (Sept., 1935.)
- MORRISON, A. ; Morris Lodge, Gong Hill, Farnham, Surrey. (Jan., 1932.)
- MOUNTAIN, Capt. WALTON ; Groombridge Place, Kent. (Feb., 1923.)
- MOWBRAY, LOUIS S., O.M.Z.S. ; Curator, The Government Aquarium, Bermuda. (Aug., 1935.)
- MULLICK, JITENDRO, F.Z.S. ; Marble Palace, Calcutta, India. (Aug., 1933.)
- MURPHY, JOHN (District Commissioner) ; Kipini Tana River, Kenya Colony. (Oct., 1932.)
- MUSEUM OF COMPARATIVE ZOÖLOGY (rejoined) ; at Harvard College, Cambridge, Massachusetts, U.S.A.
- NAETHER, Professor CARL ; University Park, Los Angeles, California, U.S.A. (June, 1934.)
- NELSON, RICHARD ; 735 Holderness Road, Hull. (April, 1925.)
- NEWMAN, T. H., F.Z.S., M.B.O.U. ; Verulam, 46 Forty Avenue, Wembley Park, Middlesex. (May, 1900.) (*Hon. Mem.*)

- NEWMARCH, C. T., F.Z.S. ; Gamage's Ltd., Holborn, W.C. (Aug., 1915.)
- NICHOLSON, ALFRED E. ; Blenheim, Forthview Terrace, Blackhall, Edinburgh, 4. (Feb., 1925.)
- NICOL, HAMISH, F.R.C.S., F.Z.S. ; Hillside, Christchurch Road, Hampstead, N.W. 3. (Jan., 1926.)
- NIGHTINGALE, F. B., F.R.I.B.A. ; 73 Albert Bridge Road, S.W. 11. (Dec., 1933.)
- NORCROSS, HERBERT ; Normanhurst, Mount Road, Middleton, Lancs. (March, 1930.)
- NORDHOFF, CHARLES B. ; Papeete, Tahiti. (Aug., 1937.)
- NORRIS, H. M. ; Lowood, 17 View Road, Highgate, N. 6. (Oct., 1931.)
- OATS, R. C. ; 15d Causeway Head, Penzance, Cornwall. (Sept., 1935.)
- OBERHOLSER, HARRY C. ; 2805 18th Street, N.W. Washington, D.C., U.S.A. (Oct., 1903.)
- OGILVIE, Mrs. BRENDA ; Bonlay Tower, Colinton, Midlothian. (May, 1927.)
- OSTREHAN, CLEMENT ; Kington Rectory, Worcester. (Jan., 1928.)
- PAGE, L. W. ; Old Linkfield, Redhill, Surrey. (June, 1937.)
- PALMER, G. E., F.Z.S. ; 83 Park Street, Camden Town, N.W. 1. (March, 1926.)
- PAM, Major ALBERT, F.Z.S. ; Wormleybury, Broxbourne, Herts. (Jan., 1906.)
- PAPE, Mrs. A. M. ; Forest Lodge, Binfield, Berks. (Oct., 1937.)
- PARTRIDGE, W. R. ; Larches, near Fladbury, Pershore, Worcestershire. (April, 1934.)
- PATTERSON, A. J. ; Ripon, Ruxley Lane, Ewell. (Jan., 1933.)
- PEARSE, Mrs. ; Channel View, Bembridge, Isle of Wight. (Rejoined.)
- PETERSON, Mrs. ; Applehill, Kelling, near Holt, Norfolk. (July, 1929.)
- PHIPPS, Mrs. ; Hailey Manor, Witney, Oxon. (Jan., 1935.)
- PICKERING, Rowland H. E. U. ; Thunder Hall, Ware, Herts. (Feb., 1936.)
- PICKFORD, RANDOLPH JOHN ; Etherley Lodge, Nr. Bishop Auckland. (Feb., 1903.)
- PIKE, L. G., F.Z.S. ; King Barrow, Wareham, Dorset. (1912.)
- PITT, W. S. ; Wildwood, Silverdale Avenue, Walton-on-Thames, Surrey. (March, 1934.)
- PLATH, KARL ; 2847 Giddings Street, Chicago, U.S.A. (July, 1924.)
- POLAK, Dr. A. C. ; Kon. Wilhelminastraat 15, Amersfoort, Holland. (Oct., 1937.)
- POLTIMORE, Lady ; Court Hall, North Molten. (Jan., 1926.)
- POPHAM, Mrs. LEYBOURNE ; Hunstrete House, Pensford, near Bristol. (July, 1937.)
- PORTER, SYDNEY, F.Z.S. ; The White Gates, Stenson Road, Derby. (April, 1920.)
- POTTER, BERNARD E., M.B., M.R.C.S., L.R.C.P., F.Z.S. ; 17 Portland Place, W. (March, 1914.)
- POTTER, Dr. H. RADFORD ; The Mount, Basingstoke, Hants. (July, 1934.)
- POTTER, W. H. ; Whetherill, Fitzillian Avenue, Harold Wood, Essex. (July, 1926.)
- POVOA, COUNT ; 108 Rua do Sol, Ao Rato, Lisbon, Portugal. (May, 1935.)

PRINCETON UNIVERSITY LIBRARY; U.S.A.

PYCRRAFT, W. P., A.L.S., F.Z.S., M.B.O.U., etc.; British Museum (Nat. Hist.), Cromwell Road, S.W. 7. (Nov., 1904.) (*Hon. Mem.*)

PYMAN, Miss E. E.; West House, West Hartlepool. (June, 1919.)

QUINCEY, R. S. DE Q.; The Vern, Bodenham, Hereford. (April, 1913.)

RAMPTON, S. C.; South Lake, Woodley, Berks. (Dec., 1935.)

REEVE, Capt. J. S., F.Z.S.; Leadenham House, Lincoln. (March, 1908.)

REVENTLOW, AXEL; Zoological Garden, Kobenhavn F., Denmark. (Jan., 1928.)

RIEVELEY, JOHN W.; Fulford, York. (June, 1929.)

RIPLEY, S. DILLON; 26 E. 81 Street, New York City, U.S.A. (Sept., 1937.)

RISDON, D. H. S.; "Remura," 130 Green Lane, Northwood, Middlesex. (Jan., 1934.)

ROBERTS, N. A.; Roughlee, Worsley Road, Worsley, near Manchester. (Jan., 1938.)

ROBERTS, Miss IDA; Beaumaris, Montpelier Street, Hobart, Tasmania. (Jan., 1923.)

ROBINSON, Mrs. T. E.; P.O. Box 2314, Bishop Trust Buildings, Honolulu, Hawaii, U.S.A. (June, 1935.)

ROBINSON, Miss ELSIE; Snapralls, Sandhurst, Berks. (Sept., 1929.)

ROBINSON, JOHN H.; 23 Cavendish Street, Ramsgate. (Sept., 1927.)

ROGERS, H. E., F.Z.S.; Zoological Park, Emswood Road, Mossley Hill, Liverpool. (June, 1919.)

ROGERS, Miss MILLICENT C.; Ingham New Hall, Ingham, Norwich. (Oct., 1936.)

ROOPER, Mrs. F.; 11 Maze Hill, St. Leonard's-on-Sea. (Aug., 1924.)

ROTHSCHILD, JAMES DE; 46 Park Street, W. 1. (March, 1923.)

ROTHSCHILD, LIONEL DE; 18 Kensington Palace Gardens, W. 8. (Nov., 1913.)

ROUSE, R. F.; Mountlands, 64 Westfield Road, Edgbaston, Birmingham. (Nov., 1932.)

ROWDEN, Mrs. VERA; Bromesberrow Court, near Dymock, Gloucestershire. (Nov., 1937.)

ROWE, ROY L.; 332 Warren Road, San Mateo, California, U.S.A. (Nov., 1937.)

ROWE, WINSTON S., N.D.A., F.B.S.A.; Oakley Cottage, Goudhurst, Kent. (Jan., 1934.)

ROY, ANANTO KUMAR; 59 Upper Chitpore Road, Calcutta, India. (March, 1934.)

ROYSTON, Mrs. R. C.; Kibore, Sotik, Kenya. (Jan., 1932.)

RUDDIN, FRANCIS H.; R.I., Box 31, Fillmore, California, U.S.A. (May, 1902.)

RUMSEY, LACY; 23 Rua de Serpa Pinto, Villa Nova de Gaya, Oporto, Portugal. (April, 1919.)

RYAN, B. J.; Executive Engineer, P.W.D., Jaipur State, Rajputana, India. (Aug., 1926.)

RYAN, G. E.; 6 Stanhope Terrace, W. 2. (June, 1931.)

- SARABHAI, AMBALAL ; The Retreat, Shahibagh, Ahmedabad, India. (Jan., 1934.)
- SCHMIDT, PAUL ; Senta, Yugoslavia. (March, 1934.)
- SCHUYL, D. G. ; Kralingscheweg 332, Rotterdam, Holland. (Jan., 1914.)
- SCLATER, W. L., M.A., F.Z.S. ; 10 Sloane Court, S.W. 3. (Aug., 1904.)
- SCOTT, A. H. ; Blissford Pool, Fordingbridge, Hants. (March, 1934.)
- SCOTT, Capt. Hamilton ; Drayton, Foxhall Road, Ipswich. (1912.)
- SCOTT-HOPKINS, Capt. C. ; Low Hall, Kirby Moorside, Yorks. (July, 1928.)
- SEPPINGS, Lieut.-Col. J. W. H., F.Z.S. ; c/o Lloyd's Bank, Ltd., Cox & King's Branch (G.3), 6 Pall Mall, London, S.W. 1. (Sept., 1907.)
- SETH-SMITH, DAVID, F.Z.S., M.B.O.U. ; Zoological Society, Regent's Park, N.W. 8. (Dec., 1894.) (*Hon. Mem.*)
- SEYMOUR, Mrs. ; Kilbeer Farm, Winkfield, Windsor. (Rejoined.)
- SHAKESPEARE, WALTER ; Sefton, St. George's Hill, Weybridge. (Aug., 1926.)
- SHEARING, A. P. ; The Aviaries, Foxwarren Park, Cobham, Surrey. (Dec., 1931.)
- SHERBROOK, WILLIAM ; The Old Vicarage, Tadworth, Surrey. (April, 1931.)
- SHERRIFF, A., F.Z.S. ; Edge Hill, 8 Ranulf Road, N.W. 2. (March, 1923.)
- SIBLEY, C. L. ; Sunnyfields Farm, Wallingford, Conn., U.S.A. (Jan., 1934.)
- SILVER, ALLEN, F.Z.S. ; 18 Baneswell Road, Newport, Mon.
- SIMPSON, ARCHIBALD ; Northwold, The Crescent, Bardsey, near Leeds. (Feb., 1901.)
- SIMPSON, H. W. ; 6 Barry Road, Stonebridge, Willesden, N.W. 10. (Nov., 1924.)
- SIMPSON, Mrs. M. K. M. ; 98 Pittencreeff Street, Dunfermline, Fife. (May, 1937.)
- SIMSON, Capt. RUPERT, O.B.E. ; Rickham, Bray, Berkshire. (July, 1932.)
- SISSONS, H. P. ; 8 Potter Street, Worksop, Notts. (April, 1927.)
- SLADE, G. J. ; Shenley, 21 Wilton Crescent, Southampton. (Feb., 1915.)
- SMITH, A. ST. ALBAN, F.Z.S. ; Peradin Estate, Pontian, Johore, Malaya. (Feb., 1929.)
- SMITH, Mrs. D. N. ; The Friars, Rye Close, West Worthing. (June, 1934.)
- SMITH, H. B. ; 3 Claremont Road, Redruth, Cornwall. (Oct., 1927.)
- SMITH, PAUL H. ; 11 Parkhill Road, Hampstead, N.W. 3. (June, 1927.)
- SMITH, W. LELAND ; Game Farm, Fair Oaks, California, U.S.A. (March, 1936.)
- SMITH, W. PROCTOR, F.Z.S. ; Moorlands, Broad Road, Sale, Manchester. (Nov., 1917.)
- SMITH, Mrs. WIKOFF ; Morris Avenue, Bryn Mawr, Penna, U.S.A. (Jan., 1935.)
- SMITH, WILLIAM RALPH ; 28 Tindale Road, Artarmon, N.S.W., Australia. (Nov., 1934.)
- SOUTHOFF, GEORGE DE, C.M.Z.S. ; 9-11 Via S. Spirito, Florence, Italy. (1921.) (*Hon. Mem.*)
- SOUTHPORT CORPORATION, CURATOR OF ; Hesketh Park, Southport. (Jan., 1904.)
- SPALDING, Mrs. PHILIP ; c/o C. M. Cook, Ltd., Honolulu, Hawaiian Islands. (March, 1935.)
- SPENCER, HENRY ; Yew Court, Scalby, Yorkshire. (Sept., 1928.)

- SPICER, Dr. G. EVAN ; Fifield House, St. Albans. (Feb., 1933.)
- SPRAWSON, EVELYN, M.C., D.Sc., M.R.C.S., F.Z.S. ; Cranford, Welcomes Road, Kenley, Surrey. (June, 1923.)
- SPURWAY, N. B. ; Meadow Court, Stoughton Drive South, Leicester. (April, 1923.)
- STARK, J. ; Woods Cottage, Haddington, Scotland. (Jan., 1924.)
- STEINBACHER, Dr. GEORG ; Berlin, W. 62, den Budapester Strasse 36. (Jan., 1937.)
- STEPHENS, JOHN ; Kingswood Chase, Hindhead, Surrey. (Sept., 1932.)
- STEVENS, R. and N. ; Walcot Hall, Lydbury North, Shropshire.
- STEWART, JOHN ; The Hermitage, Elstead, Surrey. (Rejoined.)
- STEYNE, ALAN N. ; American Consulate General, 1 Grosvenor Square, W. 1. (Sept., 1932.)
- STIGAND, Mrs. PEARSALL ; Antica Casa Colonica, 19 Via Augusto Baldesi, San Gervasio, Florence. Italy. (Dec., 1932.)
- STILEMAN, GERALD R., F.Z.S. ; Down House, Soberton, Hants. (Rejoined Feb., 1932.)
- STILEMAN, Mrs. G. R. ; Down House, Soberton, Hants. (July, 1937.)
- STOKES, Capt. H. S., F.Z.S., M.B.O.U., M.C. ; Longdon, Rugeley, Staffordshire. (Oct., 1922.)
- STROMBI, Miss DORA A. ; East Bank House, Brechin, Angus. (April, 1930.)
- STUBBS, Mrs. E. C. ; Robeth, 4 Beaumont Road, Worthing. (Nov., 1935.)
- SUGGITT, ROBERT ; Suggitt's Lane, Cleethorpes, Grimsby. (Dec., 1903.)
- SUMMERSKILL, C. C. ; 19 Alma Road, Winton, Bournemouth. (March, 1925.)
- SWAN, J. C. ; 73 The Drive, Hove, Sussex. (Nov., 1933.)
- SWEETNAM, Rev. Preb. J. E., F.B.S.A. ; The Rectory, Enborne, Newbury, Berks. (Feb., 1931.)
- SWINBURNE, Dr. S. C. ; "Wychwood," Hawkhurst, Kent. (June, 1937.)
- SYKES, JOHN ; Whitehouse Cottage, Inveresk, Musselburgh, Midlothian. (Jan., 1912.)
- TAKA-TSUKASA, PRINCE NOBUSUKE, F.Z.S. ; 1732 Sanchome, Kamimeguro, Meguro-ku, Japan. (Feb., 1914.)
- TANNER, Dr. FRANK L. ; Vanvert House, Guernsey. (Jan., 1914.)
- TARONGA ZOOLOGICAL PARK TRUST ; Mosman, Sydney, Australia. (Aug., 1913.)
- TAVISTOCK, The Marquess of, F.Z.S. ; Barrington House, Lindfield, Sussex. (1912.)
- TAYLOR, F. W., J.P. ; 34 West Sunnyside, Sunderland. (April, 1933.)
- TEAGUE, P. W. ; Lybrook, Broadway, Worcestershire. (June, 1930.)
- TEBBITT, MICHAEL ; 8 Malpas Drive, Pinner, Middlesex. (July, 1937.)
- TENNANT, Hon. STEPHEN ; Wilsford Manor, Salisbury. (April, 1926.)
- THOM, ALFRED A. ; Whitwell Lodge, Whitchurch, Salop. (June, 1913.)
- THOMAS, F. E. ; "Edendale," Creswick Road, Springfield Park, Acton, W. 3. (Oct., 1931.)
- THOMASSET, BERNARD, C., F.Z.S. ; Seend, near Melksham, Wilts. (July, 1896.)
- THOMPSON, Capt. G. W. ; Ardwell, Steel Cross, Crowborough. (March, 1930.)
- TODD, HORATIO, J.P., M.P.S.I., F.C.S. ; Bromleigh, Neill's Hill, Belfast. (Aug., 1924.)

- TONG, RUDDY ; P.O. Box 216, Macao, China. (March, 1935.)
- TRANSVAAL MUSEUM ; The Director, Transvaal Museum, Pretoria. (Jan., 1921.)
- TRAVERS, Mrs. J. ; Windmill Cottage, Mayfield, Sussex. (Dec., 1903.)
- TUMA, F. L. ; Riegrovo nab 34, Prague 2, Czechoslovakia. (May, 1933.)
- TURNER, A. GEOFFREY ; Hungerford Park, Berks. (July, 1934.)
- TURNER, H. B. ; Malverleys, near Newbury. (April, 1928.)
- TURNER, WALTER ; 476 Pitt Street, Sydney, N.S.W.
- TYEBJEE, ABDE AMIRUDDIN SHALEBHOY ; Little Gibb's Road, Malabar Hill, Bombay. (Sept., 1934.)
- TYSER, Mrs., F.Z.S. ; Dudbrook, near Brentwood, Essex. (Jan., 1934.)
- UPPINGHAM SCHOOL ; the school library, the Old School House, Uppingham. (Nov., 1920.)
- VALENTINE, ERNEST ; 7 Highfield, Workington, Cumberland. (May, 1899.)
- VAN HEYST, A. F. C. A. ; Westersingel 68, Rotterdam, Holland. (March, 1934.)
- VANDESMET, Madame S. ; Blue-Maison, par Watten, Nord, France. (Nov., 1936.)
- VANE, E. N. T. ; Ridgeway, Joel Park Estate, Joel Street, Pinner, Middlesex. (March, 1937.)
- VENNER, Rev. P. K. ; Gosfield Vicarage, Halstead, Essex. (April, 1923.)
- VENNING, H. C. ; Willett, Bicknaller, Taunton. (Jan., 1927.)
- VEREY, Mrs. A. FLORENCE ; Hare Hollow, Middleton, Bognor Regis. (March, 1936.)
- VIERHELLER, GEO. P. ; St. Louis Zoological Park, St. Louis, Mo., U.S.A. (March, 1928.)
- VOY, Miss HILDA ; Oak Hill, Haslemere, Surrey. (Sept., 1936.)
- VROOM, Mrs. DOUGLAS E. ; 555 South Wilton Place, Los Angeles, Calif., U.S.A. (Rejoined.)
- WACHSMAN, A. E. WRIGHT DE BERRI ; Maitai, Murray Road, Beecroft, N.S.W. (Aug., 1914.)
- WADE-GERY, Mrs. M. ; Bushmead Priory, near Bedford. (May, 1934.)
- WALKER, Miss H. K. O. ; Chesham, Bury, Lancs. (Feb., 1895.)
- WALLER, H. ; Kittsbury, 64 St. Julians Farm Road, West Norwood, S.E. 27.
- WARRE, Captain GEORGE F. ; 47 Lonsdale Road, Barnes, S.W. 13. (Feb., 1936.)
- WARRE, Mrs. PHILIP ; Coppid Hall, Stifford, Essex. (June, 1935.)
- WARWICK, FRANCES, COUNTESS OF ; Easton Lodge, Dunmow, Essex. (Dec., 1937.)
- WAUD, Capt. L. REGINALD, F.Z.S., M.B.O.U. ; Bradley Court, Chieveley, near Newbury. (May, 1913.)
- WEBB, C. S. ; Thirlmere, Beachborough Villas, Shorncliffe Road, Folkestone, Kent. (March, 1928.)
- WEBB, PATRICK B. ; Barney's Brae, Randalstown, Co. Antrim, N. Ireland. (Aug., 1929.)
- WEBBER, LEONARD C. ; H.M.A.S. *Australia*, c/o G.P.O., Sydney, N.S.W., Australia. (June, 1935.)

- * WEBER, ORLANDO F., JUNR. ; 22 East 82nd Street, New York, U.S.A. (Jan., 1937.)
- WESTMACOTT, Captain G. R., D.S.O. ; Rodmell Farm, near Lewes, Sussex. (Feb., 1933.)
- WESTMACOTT, Lady ; Hotel Vendôme, Place Vendôme, Paris, 1^e. (Dec., 1928.)
- WESTON, CLIFFORD ; Hall Leys, Oadby, near Leicester. (Jan., 1938.)
- WHARTON-TIGAR, MRS. N., F.Z.S. ; 10 Charlcott Crescent, N.W. 1. (July, 1932.)
- WHITBURN, MRS. C. M. S. ; Amport St. Mary's, Andover, Hants. (July, 1934.)
- WHITE, JOHN YORK ; Chaseley, 22 Willett Way, Petts Wood, Kent. (Jan., 1925.)
- WHITEHEAD, G. ; 192 Park Road, West Hartlepool. (Jan., 1936.)
- * WHITLEY, HERBERT, F.Z.S. ; Primley Hill, Paignton, S. Devon. (Sept., 1923.)
- WHITMORE, G. E. ; 168 High Street, West Bromwich, Birmingham. (July, 1935.)
- WHITTINGHAM, W. NEVILLE ; 2 Park Avenue, Harrogate. (Feb., 1928.)
- WILDEBOER, Dr. H. G. ; Burnbrae, Holderness Road, Hull. (1924.)
- WILKINS, A. ; Rendcombe, Chesham, Bucks. (April, 1930.)
- WILLFORD, HENRY ; San Souci, Havenstreet, Ryde, Isle-of-Wight. (Nov., 1907.)
- WILLIAMS, SIDNEY, F.Z.S. ; 19 Beechdale, Winchmore Hill, N. 21. (Oct., 1910.)
- WILSON, AND., F.Z.S. ; 233 Argyle Street, Glasgow, C. 2. (April, 1927.)
- WILSON-JONES, MRS. KATHLEEN ; Lanivet, near Bodmin, Cornwall. (Jan., 1934.)
- WINTER, DWIGHT ; Center and Negley Avenue, Pittsburgh, Pa., U.S.A. (1922.)
- WITTING, R. C. ; 20 Bucklersbury, E.C. 4. (July, 1937.)
- WOOD, Dr. CASEY, F.Z.S. ; McGill University Library, Montreal, Canada. (Sept., 1922.)
- WOOD, Miss ELLEN ; Nokhroy, 27 Scott's Avenue, Shortlands, Kent. (Aug., 1933.)
- WOOD, MRS. MURIEL ; 8 Lambolle Road, N.W. 3. (July, 1927.)
- WOODCOCK, GEORGE ; Buckland, Banstead Road, Banstead, Surrey.
- WORKMAN, WILLIAM HUGHES, F.Z.S., M.B.O.U. ; Lismore, Windsor Avenue, Belfast. (May, 1903.)
- YEALLAND, JOHN ; Armendy, Sterrebeek, Wesembeck-Ophem, Belgium. (July, 1934.)
- YOUNGER, Major CHARLES ARTHUR JOHNSTON (Retired) ; Green Walls, Rake Hanger, near Liss, Hants. (July, 1932.)
- YOUNGER, MRS. CHARLES ; Green Walls, Rake Hanger, near Liss, Hants. (Feb., 1932.)
- ZAMORA, VENCENTE ; 351 R. Hidalgo Street, Manila, Philippine Islands. (Oct., 1936.)
- ZIPP, W. C. H. ; P.O. Box 6899, Johannesburg, Transvaal, South Africa. (April, 1937.)

THE AVICULTURAL SOCIETY OF SOUTH AUSTRALIA (ADELAIDE)

LIST OF AFFILIATED MEMBERS

- BASSE, FREDERICK ; St. Austell, Burnside Road, Kensington Gardens, Adelaide, South Australia.
- BENN, J. E. ; 2 Laureate Street, Pt. Pirie West, South Australia.
- DUNSTONE, Dr. ; Woodville Road, Woodville, Adelaide, South Australia.
- HAMILTON, Dr. Wm. ; Wakefield Street, Adelaide, South Australia.
- HARVEY, S. (*Hon. Secretary*) ; 80 Northgate Street, Millswood, Adelaide, South Australia.
- KINGDON, J. ; Loxton, South Australia.
- KITCHEN, F. C. ; P.O. Box 16A, Broken Hill, N.S.W., Australia.
- LEWIS, G. ; c/o A. & E. Lewis, Pirie Street, Adelaide, South Australia.
- MACGILLIVRAY, Dr. I. H. ; Blende Street, Broken Hill, N.S.W., Australia.
- MINCHIN, R. ; Zoological Gardens, Adelaide, South Australia.
- PENNEY, W. K. ; "Mount Cooper," Anzac Highway, Plympton, Adelaide, South Australia.
- SEPPELT, OSCAR ; Seppeltsfield, Tanunda, South Australia.
- SEWELL, H. S. ; 14 Stannington Avenue, Toorak East, Adelaide, South Australia.
- SHEPHERD, Rev. H. E. G. ; Waikerie, South Australia.
- WHITE, A. L. ; Chisholm Avenue, Erindale, Adelaide, South Australia.
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THE AVICULTURAL SOCIETY OF VICTORIA

LIST OF AFFILIATED MEMBERS

- CLENDINNEN, Dr. L. J. ; 105 Collins Street, Melbourne, C. I, Victoria, Australia.
- DAVIES, Dr. F. L. ; High Street, Malvern, S.E. 3, Melbourne, Victoria, Australia.
- JAKES, ALAN ; Balwyn Road, Balwyn, E. 8, Melbourne, Victoria, Australia.
- MOORE, V. ; 375 Upper Heidelberg Road, Ivanhoe, Melbourne, Victoria, Australia.
- TUCKER, W. A. ; Rosebank, Canterbury Road, Blackburn, Victoria, Australia.

THE AVICULTURAL SOCIETY OF NEW ZEALAND

Patron :

HIS WORSHIP THE MAYOR OF AUCKLAND.

President :

MRS. J. P. CAMPBELL.

Vice-Presidents :

MRS. E. BULLOCK, MRS. B. SUTHERLAND, MRS. G. COLLINS, MESSRS. G. M. CORBET, JOHN BLACK, ALEX R. STRANG, W. J. CROWTHER.

Hon. Sec. and Treasurer :

MR. G. ROLAND HUTCHINSON.

Editor :

MR. GEO. REID.

Auditor :

MR. H. P. BLAKEY.

Executive Committee : MR. J. C. WHITNEY (*Chairman of the Executive Committee*), MESSRS. JAS. SMITH, F. POLLARD, A. E. HENLEY.

LIST OF AFFILIATED MEMBERS

- AINSWORTH, A. ; 7 Samoa Street, Kilbirnie, Wellington, N.Z.
 ANDERSON, A. ; St. John's Hill, Wanganui, N.Z.
 AUCKLAND CITY COUNCIL ; Representative, Col. SAWER, Auckland Zoological Gardens, Auckland, W. 2, N.Z.
 BAGNALL, H. G. ; P.O. Box 117, Palmerston North, N.Z.
 BARNES, A. G. ; 18 Heywood Crescent, Epsom, Auckland, S.E. 3, N.Z.
 BLACK, J. W. ; P.O. Box 102, Dunedin, N.Z.
 BLAKEY, H. P. (Dentist) ; Broadway, Newmarket, Auckland, S.E. 1, N.Z.
 BULLOCK, MRS. E. ; 6 Clifton Road, Hamilton, Waikato, N.Z.
 CAMPBELL, MRS. J. P. (*President*) ; 16 Arney Road, Remuera, Auckland, S.E. 2, N.Z.
 CARRUTHERS, R. L. ; King Street, Opotiki, Bay of Plenty, N.Z.
 COLLINS, MRS. G. ; 433 South Road, New Plymouth, N.Z.
 CORBET, G. M. (*Vice-President*) ; P.O. Box 183, Invercargill, N.Z.
 CROWTHER, W. J. ; Remuera Road, Remuera, Auckland, N.Z.
 DERSCHIED, Dr. D. M., "Armendy," Sterrebeek, Belgium.
 EDWARDS, HOWARD (Dental Surgeon) ; Wanganui, N.Z.
 EWEN, MRS. J. F. ; 62 Remuera Road, Remuera, Auckland, S.E. 2, N.Z.
 EWENS, MRS. A. ; 618 Cargill Road, Dunedin, N.Z.
 HASTINGS BOROUGH COUNCIL ; P.O. Box 218, Hastings, Hawkes Bay, N.Z.
 HENLEY, A. E. ; 66 Victoria Street, W. Auckland, C. 1, N.Z.
 HUGHES, Miss K. ; Jubilee Private Hotel, Currie Street, New Plymouth, Taranaki, N.Z.
 HUTCHINSON, G. ROLAND (*Hon. Secretary and Treasurer*) ; 5 Keith Avenue, Remuera, Auckland, S.E. 2, N.Z.
 JONES, MRS. E. ; 337 Victoria Street, Hamilton, Waikato, N.Z.
 JUST, A. W. ; 60 College Street, W., Palmerston N., N.Z.
 KING, W., King's Fish Supply, Main Street, Gore.

- LUCAS, Mrs. N. O. ; Woodlands Road, Glen Eden, Auckland, N.Z.
MAYZE, Miss M. ; Matron, Mental Hospital, Auckland, W. 3, N.Z.
McKAY, D. ; P.O. Box 53, New Plymouth, Taranaki, N.Z.
McNEILL, CHAS. ; P.O. Box 267, New Plymouth, N.Z.
MITCHELL, J. ; Gordon Road, Mosgiel, N.Z.
NATHAN, Mrs. CHAS. ; 19 Arney Road, Remuera, Auckland, S.E. 2, N.Z.
PARKER, Mrs. T. ; 1 Oakley Avenue, Hamilton, Waikato, N.Z.
PAUL, J. T. ; 150 St. David Street, Dunedin, N.Z.
PORTER, E. ; 4 Arney Crescent, Remuera, Auckland, S.E. 2, N.Z.
PRISCOTT, J. ; Hood Street, Hamilton, Waikato, N.Z.
REID, GEO. ; "Grassington," Rotherham, North Canterbury, N. 2, N.Z.
ROBINSON, J. W. ; Exeter Street, Abbotsford, Dunedin, N.Z.
SMITH, JAS. ; 5 Dunbar Road, Mt. Eden, Auckland, S. 2, N.Z.
SOWMAN, C. ; 24 Connolly Street, Lower Hutt, Wellington, N.Z.
SPENCER, Mrs. L. C. ; 11 Dilworth Avenue, Remuera, Auckland, S.E. 2, N.Z.
STARR, D. ; 11 Avon Street, Frankton Junction, Waikato, N.Z.
STRANG, ALEX. R. ; Frankleigh Park, New Plymouth, N.Z.
SUTHERLAND, Mrs. B. ; "Homewood," Homewood Avenue, Karori,
Wellington, N.Z.
SUTHERLAND, Master JOHN ; "Homewood," Homewood Avenue, Karori,
Wellington, N.Z.
TAYLOR, F. G. ; P.O. Box 26, Kaiapoi, Canterbury, N.Z.
TRENWITH, A. A. ; King Street, Pukekohe, Auckland, N.Z.
VALLENCE, P. K. O. ; c/o Dalgety and Co., Ltd., Dunedin, N.Z.
WATSON, E. J. ; 8 Wood Street, Palmerston North, N.Z.
WHITNEY, GREY ; 21A Victoria Avenue, Remuera, Auckland, S.E. 2, N.Z.
WILSON, Master C. M. ; 23 Portland Road, Remuera, Auckland, S.E. 2, N.Z.
WOOD, BRETT ; Randolph Downs, Amberley, Christchurch, N.Z.

Rules of the Avicultural Society

As amended, November, 1930

1.—The name of the Society shall be THE AVICULTURAL SOCIETY, and its object shall be the study of Foreign and British Birds in freedom and in captivity. Poultry, Pigeons, and Canaries shall be outside the scope of the Society. The year of the Society, with that of each volume of the Society's Magazine, which shall be known as the AVICULTURAL MAGAZINE, shall commence with the month of January and end on the 31st of December following.

2.—The Avicultural Society shall consist of Ordinary and Honorary Members, and the latter shall be restricted in number to six, and be elected by the Council.

3.—The Officers of the Society shall be elected, annually if necessary, by members of the Council in the manner hereinafter provided, and shall consist of a President, one or more Vice-Presidents, a Secretary, an Editor, a Treasurer, an Auditor, a Scrutineer, and a Council of eighteen members. The Secretary, Editor, and Treasurer shall be *ex officio* Members of the Council.

4.—New Members shall be proposed in writing, and the name and address of every person thus proposed, with the name of the Member proposing him, shall be published in the next issue of the Magazine. Unless the candidate shall, within two weeks after the publication of his name in the Magazine, be objected to by at least two Members, he shall be deemed to be duly elected. If five members shall lodge with the Secretary objections to any candidate he shall not be elected, but the signatures to the signed objections must be verified by the Scrutineer. If two or more Members shall object to any candidate, the name of such candidate shall be brought before the Council at their next meeting, and the Council shall have power to elect or to disqualify him from election.

5.—Each Member shall pay an annual subscription of £1, to be due and payable in advance on the 1st of January in each year. New Members shall pay, in addition, an entrance fee of 10s.; and, on payment of their entrance fee and subscription, they shall be entitled to receive all the numbers of the Society's Magazine for the current year.

6.—Members intending to resign their membership at the end of the current year of the Society are expected to give notice to the Secretary before the 1st of December, so that their names may not be included in the "List of Members", which shall be published annually in the January number of the Magazine.

7.—The Magazine of the Society shall be issued on or about the first day of every month, and forwarded, post free, to *all the Members who shall have paid their subscriptions for the year ; but no Magazine shall be sent or delivered to any Member until the annual subscription shall have reached the hands of the Business Secretary or the Publishers.* Members whose subscriptions shall not have been paid as above by the first day in November in any year shall cease to be Members of the Society, but may be re-admitted, at the discretion of the Council, on payment of the annual subscription.

8.—The Secretary, Editor, and Treasurer shall be elected for a term of five years, and, should a vacancy occur, it may be temporarily filled up by the Executive Committee (see Rule 10). At the expiration of the term of five years in every case it shall be competent for the Council to nominate the same officer, or another Member, for a further term of five years, unless a second candidate be proposed by not less than twenty-five Members of at least two years' standing, as set forth below.

In the November number of the Magazine preceding the retirement from office of the Secretary, Editor, or Treasurer, the Council shall publish the names of those members whom they have nominated to fill the vacancies thus created ; and these members shall be deemed duly elected unless another candidate or candidates be proposed by not less than fifteen Members of at least two years' standing. Such proposal, duly seconded and containing the written consent of the nominee to serve, if elected, in the capacity for which he is proposed, must reach the Secretary on or before the 15th of November.

The Council shall also publish yearly in the November number of the Magazine the names of those members nominated by them for the posts of Auditor and Scrutineer respectively.

9.—The Members of the Council shall retire by rotation, two at the end of each year of the Society (unless a vacancy or vacancies shall occur otherwise) and two other Members of the Society shall be recommended by the Council to take the place of those retiring. The names of the two Members recommended shall be printed in the November number of the AVICULTURAL MAGAZINE. Should the Council's selection be objected to by fifteen or more Members, these shall have power to put forward two other candidates, whose names, together with the signatures of no less than fifteen Members proposing them, must reach the Hon. Secretary *by the 15th of November.* The names of the four candidates will then be printed on a voting paper and sent to each Member with the December number of the Magazine, and the result of the voting published in the January issue. Should no alternative candidates be put forward, in the manner and by the date above specified, the two candidates recommended by the Council shall be deemed to have been duly elected. In the event of an equality of votes the President shall have a casting vote.

If any Member of the Council does not attend a meeting for two years in succession the Council shall have power to elect another member in his place.

10.—Immediately after the election of the Council that body shall proceed to elect three from its Members (*ex officio* Members, not being eligible). These three, together with the Secretary, Treasurer, and Editor, shall form a Committee known as the Executive Committee. Members of the Council shall be asked every year (whether there has been an election of that body or not) if they wish to stand for the Executive, and in any year when the number of candidates exceeds three there shall be an election of the Executive.

The duties of the Executive Committee shall be as follows :—

- (i) To sanction all payments to be made on behalf of the Society.
- (ii) In the event of the resignation of any of the officers during the Society's year, to fill temporarily the vacancy until the end of the year. In the case of the office being one which is held for more than one year (e.g. Secretary, Editor, or Treasurer) the appointment shall be confirmed by the Council at its next meeting.
- (iii) To act for the Council in the decision of any other matter that may arise in connection with the business of the Society.

The decision of any matter by the Executive to be settled by a simple majority (five to form a quorum). In the event of a tie on any question, such question shall be forthwith submitted by letter to the Council for their decision.

The Executive shall not have power

- (i) To add to or alter the Rules ;
- (ii) To expel any Member ;
- (iii) To re-elect the Secretary, Editor, or Treasurer for a second term of office.

It shall not be lawful for the Treasurer to pay any account unless such account be duly initialled by another Member of the Executive.

It shall be lawful for the Secretary or Editor to pledge the Society's credit for a sum not exceeding £50.

Should a Member wish any matter to be brought before the *Council* direct such matter should be sent to the Secretary with a letter stating that it is to be brought before the Council at their next meeting, otherwise communications will in the first place be brought before the Executive.

A decision of a majority of the Council, or a majority of the Executive endorsed by the Council, shall be final and conclusive in all matters.

11.—The Editor shall have an absolute discretion as to what matter shall be published in the Magazine (subject to the control of the Executive Committee). The Secretary and Editor shall respectively refer all matters of doubt and difficulty to the Executive Committee.

12.—The Council (but not a committee of the Council) shall have power to alter and add to the Rules, from time to time, in any manner they may think fit. Five to form a quorum at any meeting of the Council.

13.—The Council shall have power to expel any Member from the Society at any time without assigning any reason.

14.—Neither the office of Scrutineer nor that of Auditor shall be held for two consecutive years by the same person.

15.—The Scrutineer shall not reveal to any person how any Member shall have voted.

The Society's Medal

RULES

The Medal may be awarded at the discretion of the Committee to any Member who shall succeed in breeding, in the United Kingdom, any species of bird which shall not be known to have been previously bred in captivity in Great Britain or Ireland. Any Member wishing to obtain the Medal must send a detailed account for publication in the Magazine within about eight weeks from the date of hatching of the young, and furnish such evidence of the facts as the Executive Committee may require. The Medal will be awarded only in cases where the young shall live to be old enough to feed themselves, and to be wholly independent of their parents. No medal can be given for the breeding of hybrids, or of local races or sub-species of species that have already been bred.

The account of the breeding must be reasonably full so as to afford instruction to our Members, and must appear in the AVICULTURAL MAGAZINE before it is published or notified elsewhere. It should describe the plumage of the young, and *be of value as a permanent record of the nesting and general habits of the species*. These points will have great weight when the question of awarding the Medal is under consideration.

In every case the decision of the Committee shall be final.

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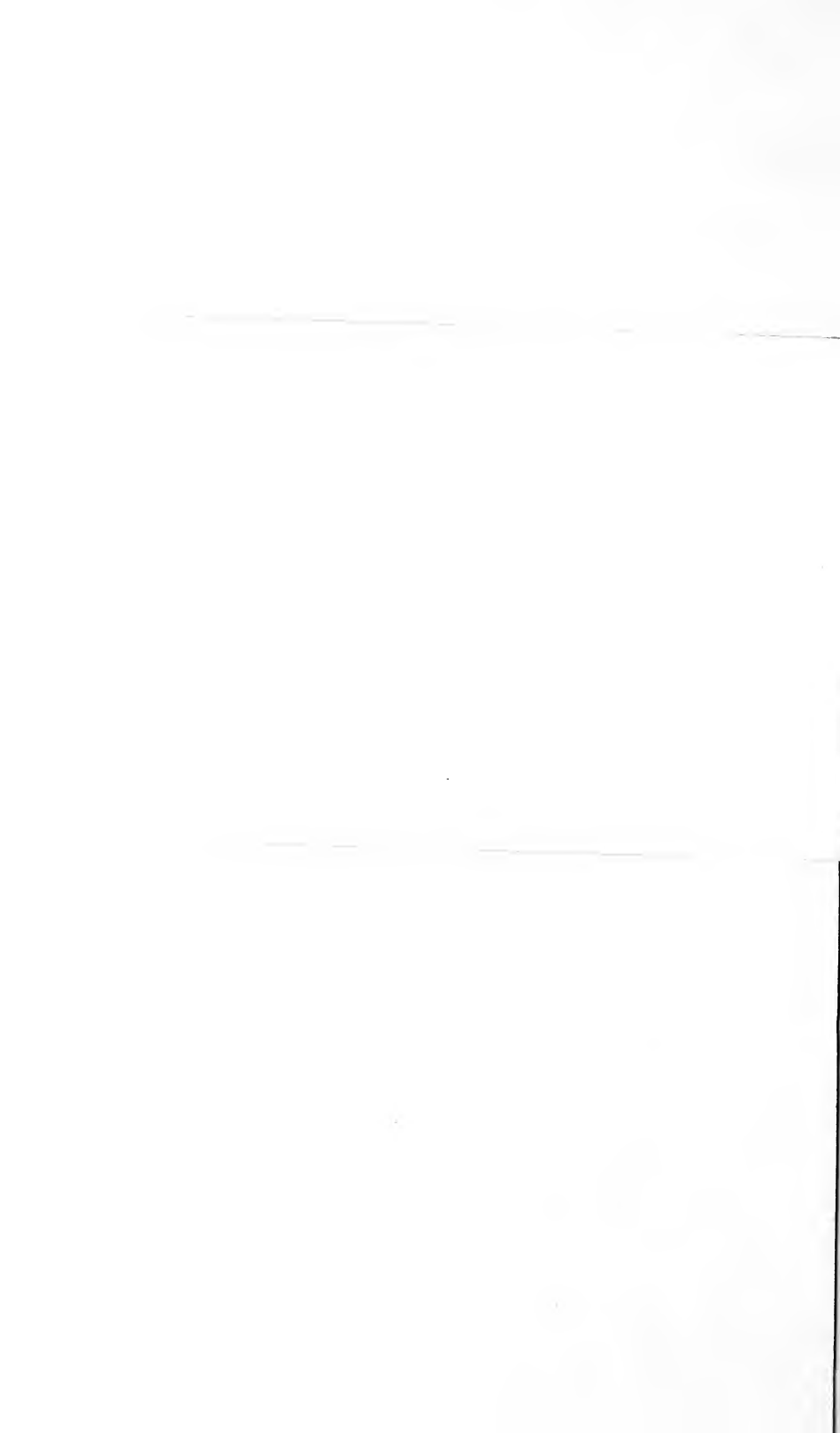
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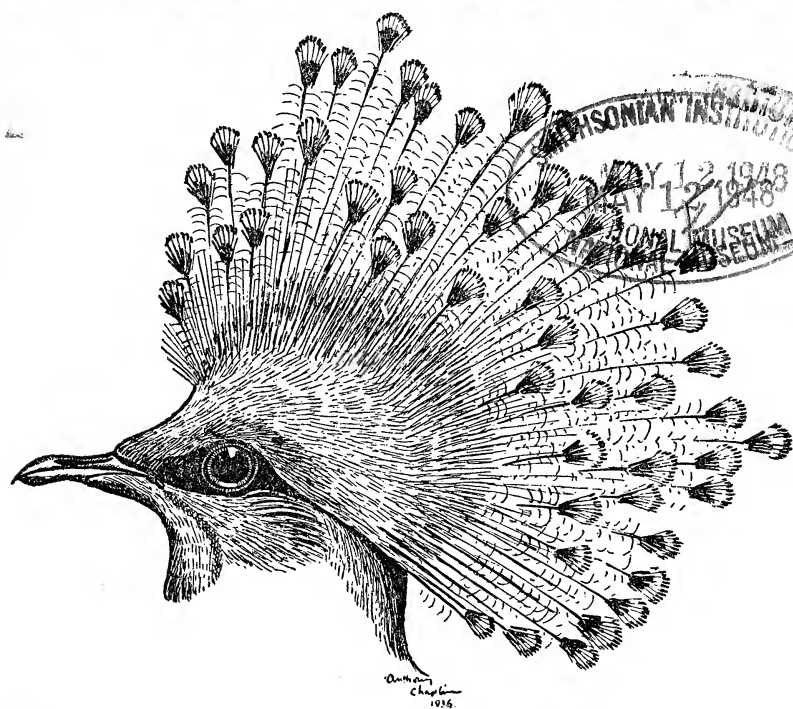
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THE AVICULTURAL MAGAZINE



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THE AVICULTURAL SOCIETY

FOUNDED 1894

NOTICE TO MEMBERS

The Subscription to the Avicultural Society is £1 per annum, due on the 1st of January in each year, and is payable in advance. The entrance fee is 10/-. The *Avicultural Magazine* is sent free to members monthly. Members joining at any time during the year are entitled to the back numbers for the current year, on the payment of entrance fee and subscription.

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Rule 1.—A short account of the illness should accompany the specimen. All birds to be sent as fresh as possible to Mr. C. H. HICKS, The Zoological Society of London, Regent's Park, London, N.W. 8.

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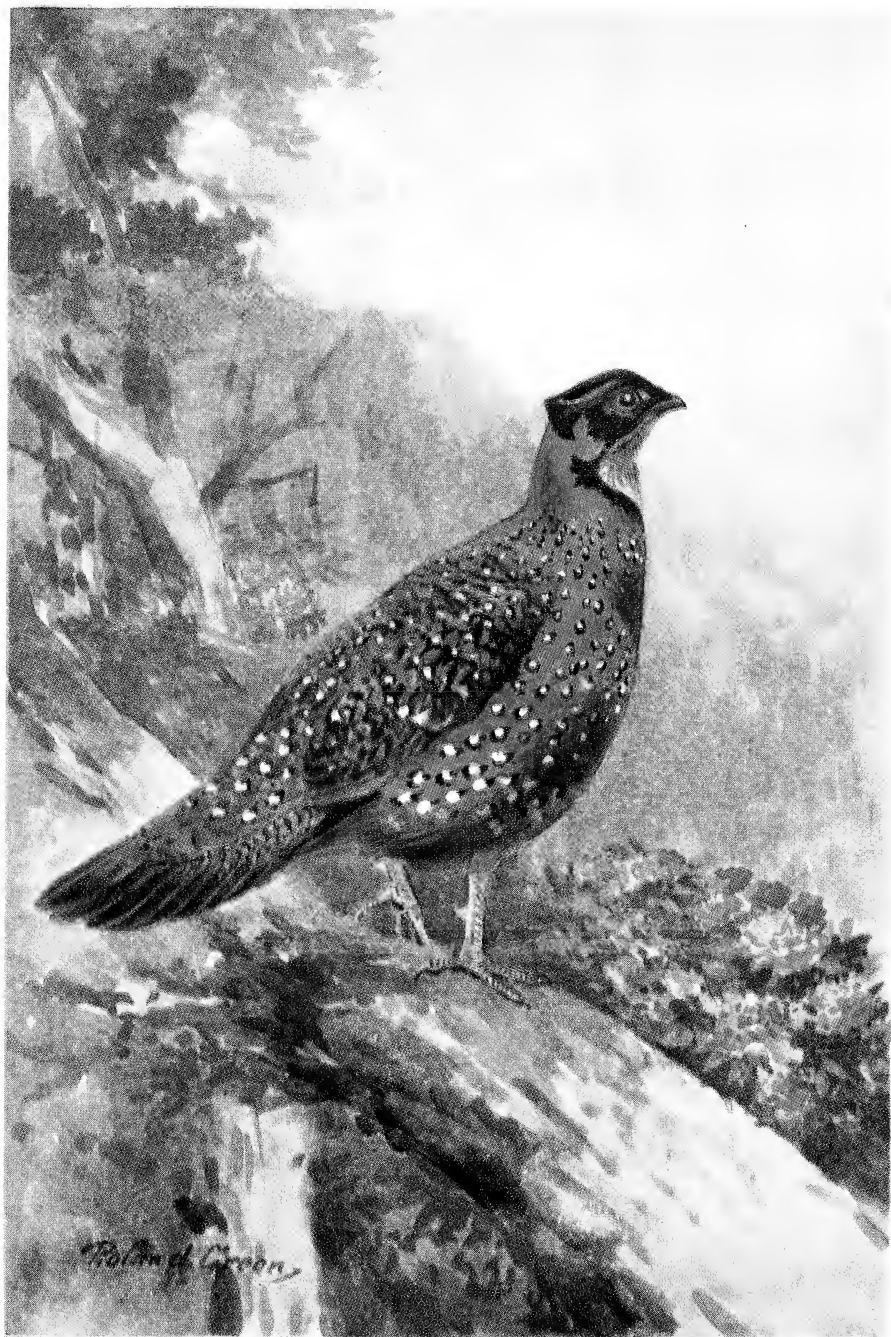
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THE AVICULTURAL MAGAZINE

THE JOURNAL OF THE
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JANUARY, 1938.

SATYR TRAGOPAN

(*Tragopan satyra* (Lin.))

This extremely beautiful bird is found in the higher wooded slopes of the Central and Eastern Himalayas. As in the case of other birds inhabiting these lofty regions, Tragopan work gradually down at the approach of winter. Even then, however, they are not very gregarious, though it is reported that one or two young birds and the mother keep together for the greater part of the winter. When they feel approaching danger they slip silently away into the bamboo thickets.

The call note is very distinct from either the alarm or the challenge cries. The male utters the call as a prelude to his nuptial display—a high, rather quavering “Baa ! baa ! baa !” But the challenge of the adult cock is a most remarkable sound with wonderful carrying power. When heard 50 yards away its deep half-booming, half-bleating character is very evident. Tragopan cocks in captivity utter this call only during a few days of the breeding season, but in wild birds the challenging is kept up for at least two weeks and probably longer.

They are omnivorous feeders but leaves and buds form their principal diet with the young green shoots of bamboo, seeds of rhododendrons, and wild fruit, with some insects.

In confinement they soon become pleasantly tame and will take tit-bits from the hand. They are monogamous, and more amiable to their wives than most of the true Pheasants. The hens as a rule make good and careful mothers.

E. F. C.

YORKSHIRE AVIARIES

By GEORGE HAMPDEN EDWARDS

I was holidaying on the North Wales coast when a happy idea occurred to me. A sunny morning in early September found me motoring along the coast and on to the Queensferry slipway, en route for Yorkshire. Gatley, Stockport, and then a long climb to Woodhead and over the grand Pennine Range down to Huddersfield.

Huddersfield is on my avicultural map, because Mr. George Beever lives there. He gave me a kindly welcome, and I lunched with him. The talk was 90 per cent Pheasants, and 10 per cent on the beauties of Yorkshire, and my hour's stay passed all too quickly listening to this keen Pheasant lover. Unfortunately, he has no birds at the moment, but is about to erect aviaries on his premises, and if I were given three guesses as to what his first purchase will be, I should say "Amherst"—three times! Amongst other things, he showed me a large and remarkably fine water painting of a Lady Amherst cock; I should much like to see it reproduced in this Magazine some day.

Nawton and Kirby Moorside are small, picturesque villages, situate at high elevation hard by the Cleveland Hills. All the villages beyond York City appeared to be clean and beautiful. Lazy villages, unchanged from the days of the stage coach. No granite kerbs confine the winding lanes, and village streets. The roadways wind along the wolds unchanged, save that they are macadam faced. But the two mentioned villages are, or ought to be, famous. Nawton and Kirby Moorside, but three miles apart, house the finest and most extensive collection of Pheasants in the country. Which explains my visit to the North Riding.

At Nawton I had the pleasure of renewing acquaintance with Mr. P. J. Lambert, who immediately took me to see Captain Scott-Hopkins's birds at Kirby Moorside.

The Captain was feeding the birds when we arrived, and he showed me over his collection. Now, Captain Scott-Hopkins is a *real* bird lover. He loves birds in the real way. He attends to them personally, feeds them, yes, cleans their aviaries, cares for them with meticulous

attention to detail—all of them—and his birds and aviaries are a credit to British aviculture.

I first inspected a young Magpie, *Corvus pica*, a perfect plumaged specimen, which, although young, exhibited a really marvellous sheen. Makes one realize how little we appreciate our native birds, and I made a mental note that I must acquire a Magpie again, now that I am about to get a home outside the smoky town area. The Magpie stood sentry to a long range of pheasantries, well planted with pretty shrubs. Golden and Lady Amherst Pheasants, *Chrysolophus pictus* and *C. amherstiae*, were represented by remarkably healthy, perfect looking birds. Hard by, Thorburn's (*Beebes*) portray of the Malay Argus, *Argusianus argus*, found its counterpart in two perfect living specimens.

Then, a beautiful pair of Reeves', *Syrnaticus reevesi*; Mikados, *S. mikado*; Peacock Pheasants, *Polyplectrons*—all perfect. The genus *Gennæus*, the Kaleege Pheasants, were present in several species, one of the most interesting being the White Crested Kaleege, *G. albocristatus*. I say most interesting, possibly because the cock slipped into the shelter and refused to come out, thus fermenting my interest. The Captain allowed me to go to the shelter, but all I could discern was an alert perching form, typical Kaleege head, and wary eye. I could also see the rather singular, lanced white breast feathers. Another Kaleege, the Swinhoe's, *G. swinhoei*, was a real picture in the setting of the well planted aviary. As with the other members of the genus, the Swinhoe's is often pugnacious in the breeding season, so that a well planted aviary with plenty of "cover" is a practical measure, as well as a picturesque setting.

But the most outstanding member of the Kaleege tribe was the finest Silver cock I have ever seen. Yes, a Silver; a lovely, clean swept bird with skin patches a glowing red, grand pencilling, and spotless plumage. He displayed while we watched, and I am bound to say I coveted that bird. But then, I recklessly broke the Tenth Commandment at almost every pen during my visit to the Captain's and Mr. Lambert's respective premises.

I cannot mention all the Pheasants at Kirby Moorside, without being in danger of making these notes appear catalogue like. But I must

make mention of one other Pheasant—a Satyr Tragopan, *T. satyra*—which came up to the Captain in a most affectionate way, and he gave the bird some green which it took from his fingers ; really, it was a picture. I was informed that this bird had been in Scott-Hopkins's possession for thirteen years, and I can well believe that it must be one of the most treasured of his feathered possessions. Tragopans, when properly cared for, are by nature tame and confiding, and it is a wonder that they are not more sought after by aviculturists. Indeed, it is a wonder to me why all aviculturists are not all Pheasant keepers, for Pheasants are surely the richest gems of aviculture. It is a large family, embracing a wide and varied manner of forms and coloration, some of which cannot fail to please. The amazing, brilliant hued Golden ; the indescribable Amherst, whose walk and poise is the very definition of grace. The lustre-coated, stocky Impeyans, the wee, soft feathered Peacock Pheasants. The affectionate, inquisitive Crossopitilons (an ugly name to bestow upon such domesticated looking, handsome birds). The masterful Kaleeges—Nepals, Horsfield's, White-crested, and others—the Firebacks, the Koklass Pheasants of the forests. The *syrmaticus* genus, which embraces the Copper Pheasants, the Reeves', whose tail, practically 5 feet of barred, flowing beauty, is proportionately as long as the Whydah's caudal plumes ; the mountain loving Mikado of Formosa, and the resplendent, lovely Elliot's Pheasant, and many others. Some are cheap, some are expensive ; all are beautiful to a degree. Some are extraordinarily free breeders, and a few offer scope for those who like the joy of trying to succeed where others have failed. Pheasant keeping has something to offer everyone—but how I digress !

Captain Scott-Hopkins showed me, in his house, two mounted birds. One was a Satyr cock which had been an extraordinarily tame and lovable creature, and which the Captain had had mounted purely out of sentiment. The taxidermist had made a good job of it. The other mounted specimen was a very rare one, and the sole known member of the genus—the White-Tailed Wattled Pheasant, *Lobiophasis bulweri*, sometimes referred to as Bulwer's Pheasant. Hitherto, I had only seen paintings of this Pheasant, without being much impressed, but an actual specimen, even though but a mounted one,

gave me a better idea of an undoubtedly magnificent creature. What a pity they are so rare in aviaries. Scott-Hopkins purchased this Bulwer's when it was a year old, and it died when it attained its full plumage, and, by the way, full plumage is not attained by *bulweri* until they are three years old.

Next I inspected a conservatory that had been adapted to house a lovely collection of exotic Finches. They were all lively, healthy specimens. I left them, feeling that the view I had long held—that the small exotic seed-eaters need to be kept under glass to do them justice—had been confirmed.

Back to Nawton. Here, Mr. Lambert's wife gave me a cordial welcome, and here I met Mr. Lambert's son, J. Lambert, who is the Secretary of the Ornamental Pheasant Society, and as keen a Pheasant lover as his father. There is an enormous range of pheasantries at Nawton, and here again shrubs and bushes inside the pens make delightful settings for the birds.

Whilst wandering around the pens, I noticed an exceptionally fine Temminck's Tragopan, *T. temmincki*, a poem in carmines and reds. Is there anything quite as lovely as a Temminck's? This bird is ten years old, and is still very fertile. Next I saw the Bornean Crested Fireback, *Lophura ignita*, general plumage black, with a purple sheen.

Swinhoe's were much in evidence. Silky of plumage, masterful of carriage, no collection can possibly be complete without them. The White (albinistic) Pheasants were very pretty. I saw two White Pheasants; I saw Satyr and Temminck's Tragopans; I saw Impeyans, Cheers, Elliot's, Crossoptilons—and the Crossoptilons were present in blue and brown varieties. Peculiar looking birds, these; and so very tame. There is quite a dog-like devotion in their manner, and they are birds that can be given free range.

There were adult and young albinistic Peafowl at Nawton. They had not attained their full trains when I was there. Personally, I do not consider the white Peafowl to be as pretty as the Green or the Blue; nevertheless they are quite fascinating. To see an albino Peacock display is to witness a splaying fan of white, and the tremulous

motion of the tail coverts enacts a miniature blizzard. But surely a cold background for his passion.

I am proud of my namesakes in pheasantdom, *Gennæus edwardsi*. They are not gaudy, but are perfect little creatures. The Edward's hen, softly brushed with the browns of autumn leaves, are not one whit less attractive than the males, stained though they are a glossy winberry purple. I think that shape and carriage count more than colour. A shapely bird—even if sombre—holds my attention far more than, say, the multi-coloured, but heavily cross-bred Golden × Amherst which has gained extra splashes of colour at the expense of the essentially individual grace of its respective forbears.

I am opposed to crossing of species of varieties of species. The argument that crosses have occurred in nature is no argument at all, for this only happens through and by way of adaptation to the particular environment of the species. If the cross is not adaptable, nature exterminates; but where the birds are man maintained, they live to be sold and possibly pollute pure stock. I found in Mr. Lambert a champion of keeping the species pure, and every bird I saw was unmistakably pure.

There were a great number of young Pheasants at Nawton. I passed pen after pen of young stock—the strongest testimony to Mr. Lambert's rearing methods—sturdy young Cheers, alert young Tragopans; in fact, all the poults were full of health.

Dawn begins early at Nawton. Long before the sky showed any tinge of grey, I awoke. A strong wind was causing the leaves of the climber about the window to play cymbals of rustling sounds, interspersed with an occasional wistful note, the whistling cry of what I subsequently discovered to be Oyster Catchers, *Hæmatopus ostralegus*. Lapwings, *Vanellus cristatus*—spirit of the marshes—added their wailing *peewit*, as I saw the square of sky greying, and then the dawn chorus began in earnest; first a wilding—a Robin—nearby, then the faint *wheep, wheep*, of a male or female Impeyan away over in the pheasantries, and the more sonorant *chir-r-pah* of the Cheer.

I was almost in the lap of Morpheus again, browsing in the medley of these delightful early morning sounds, when mine host brought me

a cup of tea and told me it was "six o'clock, and time to be around and about!"

I located the source of the night cries in a beautiful aviary in the garden. The aviary was the home of scores of Waders. In it were bushes, grass and stones, and a pool of informal design shaped roughly in the form of a map of Great Britain.

The Oyster Catchers—there were several of them—are easily domesticated. They are very pretty in their black and white plumage, and long orange beaks. The eyes are truly beautiful—crimson irides, and orange eyelids.

Swaysland, writing of the Oyster Catcher states that: "Some years ago," i.e. previous to 1901, "a flock was kept in the grounds of the Royal Pavilion, Brighton, where they attracted a great deal of attention . . . I well recollect an Oyster Catcher in the West of England that lived for many years in a fowl yard; it was quite tame and associated with the fowls and pigeons in the most friendly way . . ."

The Lapwings are very desirable aviary birds. Their short quick walk which invariably ends in a period of deliberation and thoughtful survey of the turf, is very charming to watch. They make delightful pets, and are easily satisfied in the matter of food. At Nawton, they are fed mainly on scalded biscuit meal. I intend making an aviary for waders myself, as it is quite simple to make a shallow pool—2 or 3 inches deep—a few waders will amply repay the trouble spent.

There were several other waders including Dunlins, *Tringa alpina*, and many other of the Sandpipers, and the interesting Ruff, *Machetes pugnax*, which, by the way, is polygamous. They are very playful, but easily got into a bad temper in the breeding season. There were several females present. The hen, or Reeve, is very much like the Ruff when the latter loses his ruff. A Wigeon, *Anas penelope*, was the only member of the duck family in the aviary. Wigeons are by no means as shy, in the wild state, as most waterfowl, and they very soon settle down under domesticated conditions. One can very soon gain the confidence of these Ducks and, by the way, their principal food is—grass.

A Golden Pheasant cock added a touch of bizarre to this pleasing

collection ; but the friendly Golden is quite happy amongst any small birds—bullying is not in his make-up.

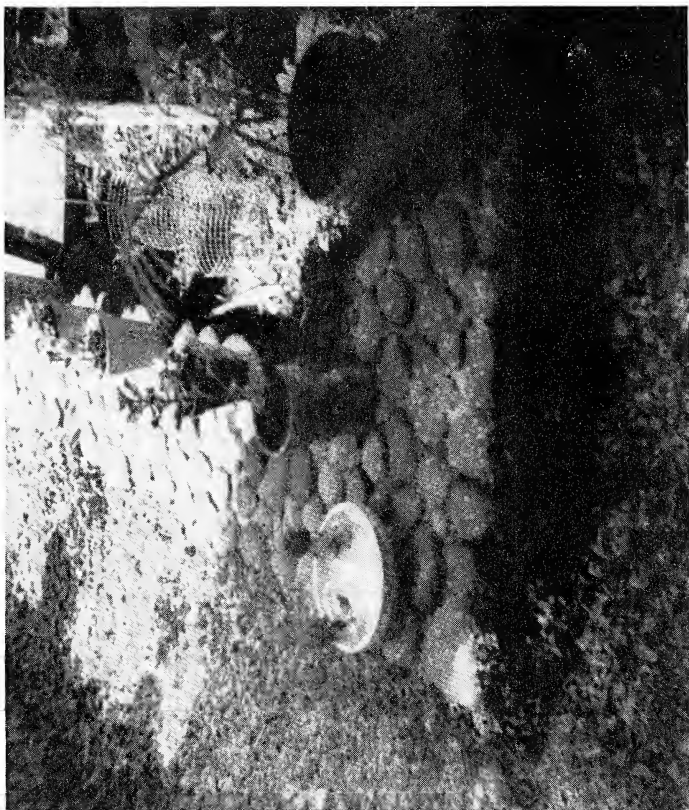
I left Nawton and the beautiful North Riding of an early morning. Twice I came across numbers of covert Pheasants crossing the roadway. I made three resolutions : (1) To acquire an extensive collection of Pheasants ; (2) to build an aviary for waders ; and (3) to revisit my kind friends Captain Scott-Hopkins and Mr. P. J. Lambert as soon as possible.

TAHITIAN AVICULTURE : ACCLIMATIZATION OF FOREIGN BIRDS

By EASTHAM GUILD

To the average person the mention of a tropical island immediately brings forth a vision of rich green foliage, brilliant flowers, and exotic birds. Tahiti is no exception to this general impression as far as foliage and flowers are concerned, but for some reason there is practically no bird life, and according to reports made by early voyagers and by ornithologists visiting the island later there have never been many kinds of birds here.

Since the climatic conditions were favourable and the profusion of grasses, weeds, and flowers provided a variety of foods, I could see no reason why certain small birds from other countries of similar climate should not thrive here and I started the experiment with a few Fire Finches and Cordon Bleus which I personally brought with me from Dakar, West Africa. The French Government has been very sympathetic in my experiments, giving me necessary permits to import birds and has passed local laws prohibiting all shooting and trapping. Likewise the British Consul General has aided me considerably to obtain permits to secure some of the exquisite and rare Australian finches. I am just now expecting through the courtesy of Mr. H. B. Brown, Secretary of the Taronga Zoo of Sydney, a shipment of about five hundred birds from Australia, including Gouldian, Long-tailed, and Star Finches all to be liberated as soon as they have been properly conditioned.



A PAIR OF BLACK TANAGERS AT THEIR FEED DISH.



MAGPIE (MANNEQUINS) NEST IN A
TRAVELUS PALM ABOUT 20 FEET
FROM THE GROUND.

So far, I have liberated about five thousand birds, of forty-four different kinds. As to results, the species may be divided into the following classes :—

BIRDS WHICH HAVE NESTED AND REARED YOUNG

Firefinch (*Logonosticta senagala*) ; African Waxbill (*Estrilda troglodytes*) ; Magpie Mannikin (*Amauresthes fringilloides*) ; California Quail (*Lophortyx californicus*) ; Chestnut-breasted Munia (*Donacola castaneithorax*) ; Cordon Bleu (*Uræginthus bengalus*) ; Orange-breasted Waxbill (*Estrilda subflava*) ; Golden Pheasant (*Chrysolophus pictus*) ; Mallard Duck (*Anas boschas*) ; Ring-necked Pheasant (*F. t. torquatus*) ; Orange Cheeked Waxbill (*Estrilda melpoda*) ; Indian Amaduvade (*Amandava amandava*) ; Zebra Finch (*Tæniopygia castanotis*) ; Sidney Waxbill (*Estrilda temporalis*) ; Saint Helena Waxbill (*Estrilda astrild*).

Under this heading come Black Tanagers (*Tachyphonus rufus*), as one pair have nested three times in a hedge near the house but, each time the nest was destroyed, probably by rats.

BIRDS WHICH COME DAILY TO BE FED, BUT HAVE NOT YET NESTED

Diamond Sparrow (*Steganopleura guttata*) ; Bicheno's Finch (*Stictoptera bichenovii*) ; Gouldian Finch (*Pæphila gouldiæ*) ; Long-tailed Grass Finch (*Pæphila acuticauda*) ; Rufous Tailed Grass Finch (*Bathilda ruficauda*) ; Mrs. Wilson's Tanager (*Tangara lavata centralis berlepsch*) ; Yellow Winged Sugar Bird (*Cæreba cyaneus*) ; Maroon Tanager (*Rhamphocælus carbo*) ; Scarlet Tanager (*Rhamphocælus brasilius*) ; Golden Tanager (*Callistes aurulenta*) ; New Zealand Zosterops (*Zosterops tasmanica*) ; Pekin Robin (*Liothrix lutea*).

These last mentioned birds disappeared a month or so after being liberated ; they are reported as having been seen on the opposite side of the island. The New Zealand Zosterops were a gift from Mr. G. Rowland Hutchinson, the President of the Avicultural Society of New Zealand.

BIRDS WHICH HAVE NOT BEEN SEEN SINCE LIBERATION

Black-headed Nun (*Munia atricapilla*) ; Blue-breasted Waxbill (*Uræginthus angolensis*) ; Cape Canary, Capetown, Africa ; American Siskin (*Carduelis tristis*) ; American Mocking Bird (*Mimis polyglottus*) ;

Pin-tailed Nonpareil (*Erythrura prasina*) ; Cherry Finch (*Aidemosyne modesta*) ; Royal Parrot Finch (*Erythrura regia*) ; Parrot Finch (*Erythrura psittacea*) ; Tri-coloured Parrot Finch (*Erythrura trichroa*) ; Spice-bird (*Munia punctulata*) ; Bronze Mannikin (*Spermestes cucullatus*) ; Tahitian White-throated Lory (*Coriphilus peruvianus*).

The last named of this group were formerly quite plentiful here, but have been extinct on Tahiti for many years. They are now to be found only on certain atolls in the Tuamotus. They are very shy birds and live in the tops of coco-nut trees where they feed on the blossoms ; they of course disappeared as soon as they were liberated, but must surely have found a natural habitat.

BIRDS WHICH I AM SURE WERE UNABLE TO THRIVE

Black Swan (*Chenopsis atrata*) ; Diamond Dove (*Geopelia cuneata*).

Before liberating any birds they are kept in aviaries a sufficient length of time to observe their habits and to condition them. Upon arrival they are put in a special house for observation and any sick birds are immediately removed. The well birds are put in conditioning aviaries to stay until they are in perfect plumage.

As soon as I feel that they are in a normal condition the birds are transferred to the liberating aviaries which face the rose garden beside my house. In the rose garden are feed dishes for the birds at liberty, to which five or six hundred birds come regularly four times a day, in response to my whistle. In the flights of the liberating aviaries are feed dishes exactly like the ones outside in the rose garden. Also the drinking and bathing fountains are correspondingly alike—one inside for the caged birds and one just outside for the free ones. On the side of the flights facing the garden and feed trays are trap doors which can be operated from the terrace by cords. When I feel that the birds in the aviaries are sufficiently accustomed to the routine of feeding, I carefully pull open the trap door and let a few birds out every day until the cage is empty. The first birds to be liberated stay in the vicinity of the flight cage attracted by their friends left inside and by the time they are all free they are accustomed to the outside feeding trays and drinking fountain and a large percentage have found suitable places nearby to sleep.

Of course this process necessitates great consultations as to the weather. I ask all my native friends in the district whether or not we will have any rain during the next three or four days and when the majority say "no", I start to liberate. Needless to say their judgment is not infallible and an "unseasonable" wind and rain come within twenty-four hours. The first Orange Breasted Waxbills that were liberated chose to spend the night under the leaves of the pandanus thatching on the roof of my house. This seemed a safe and comfortable place until a tropical downpour in the middle of the night made me doubt the wisdom of their choice. The rain came down with great force and I was certain it would pack down the wet pandanus thatch and permanently seal the birds in their new homes. But not at all—the next morning they were out and about and eagerly at the feed dishes and have evidently chosen the roof as their permanent home.

On the whole, weather conditions and climate are ideal for aviculture. The temperature is never below 70° and rarely above 90° F. and I feel that it is an ideal place for the various birds I have chosen. To be sure, we are troubled to some extent by rats and mice, but there seems to be no friction between the imported and indigenous birds. Among the native birds are the following :—

Green Fruit Pigeon, Black and White Kingfisher, Black Flycatcher (practically extinct), Small Rail, two or three Waders, small Wild Duck, New Zealand Cuckoo (migratory), Golden Plover (migratory), a variety of Tilt.

Gradually, through the presence of the birds I have imported, people on the island are becoming bird conscious. The Governor, Monsieur Chastenet de Géry, has established a feeding dish in the grounds at Government House ; also James Norman Hall, co-author with Mr. Charles B. Nordhoff of *Mutiny on the Bounty*, has put one up on his property to attract any birds that may wander to his side of the island. Mr. Nordhoff, who is keenly interested in water fowl, has done a great deal to promote this interest by liberating Wood and Mandarin Duck as well as California Quail and Pheasants.

We are receiving great help and encouragement from France through the untiring efforts of Monsieur Jean Delacour who is doing everything possible to protect the birds throughout the French colonies.

LONGTAILED GRASSFINCH × WHITE
BENGALESE

By FRANCES E. MATTHEWS

We have at the moment flying about in a rather spacious indoor aviary a pair of hybrids whose father is a fine Longtailed Grass Finch, and the mother an almost entirely White Bengalese. The birds feed themselves, and are very healthy. Their first plumage resembles mostly that of the young Longtailed Grass Finch. One bird is larger than the other. The wings are dark and prettily shaded, the breast fawn colour. There is the usual dark bib or tie very *slightly* developed, with a minute white mark in centre under lower mandible. One bird has two very minute white flecks on top of the head. The birds seem to be a pair, and are both far larger than the mother. I think they will grow to be as big as the father.

I consulted Dr. Hopkinson's records, and could find no mention of this particular cross. I have since heard from him that this is the first time this special cross has been reported to him. I may mention that we did not aim to breed this type. The Longtailed Grass Finch in the early summer lost his mate. Feeling very solitary he consoled himself (*tante de mieux*) with a very ordinary Bengalese hen; building a marvellous grass nest for her in the outdoor aviary. His attentions and patience seemed endless, though she never laid an egg. Later on we found this White Bengalese hen, but they have lived indoors. She laid several eggs but hatched out two birds.

THE TYRANNY OF "THE TRADE"

By LORD TAVISTOCK

One of the more sinister, undesirable features noticeable in connection with the bird fancy of recent years has been the increasing tendency of dealers and important firms selling bird food, etc., to try and stifle legitimate criticism of their methods or wares and legitimate recommendation of other people's products. The popular Fancy Press seems

scared stiff of them ! There is no packet Parrot Food on the market known to me (or, I should imagine to anyone else), which is suitable to form the staple diet of any species of parrot—but it is almost as much as one's life is worth to say so !

If a certain food or food ingredient is of special value for certain birds—as Dr. Allinson's Food is of special value for Lories—the day is long past when, for the assistance of newcomers to aviculture, you were permitted to mention it in the weekly bird papers by name. It has got to be referred to as "a certain proprietary food" lest rival firms selling, possibly, an inferior or unsuitable product, should get jealous ! And should one ever be bold enough, even in the most temperate and helpful way, to criticize the honesty or humanity of any section of the dealers' fraternity what a hornets' nest is speedily about one's ears !

I remember once seeing in a London dealer's window examples of gross cruelty in the mismanagement and overcrowding of fish. When I called attention to this in the *Fancy Press* a firm other than the actual offender descended upon me with such wrathful protestations of injured innocence that I was left with little doubt that my cap must fit more heads than I realized !

On another occasion I was rash enough to be partly responsible for the publication of the statement that "the maxim that honesty is the best policy is no more universally realized in the bird trade, than in other branches of livestock dealing". Once more a clear (?) conscience seemed surprisingly inadequate to protect the tender feelings of the innocent from wounds that the qualifying word "universally" should surely have spared them. More vigorous protests. Unfortunately, however, the memories of some of the protesters were shorter than mine and I had occasion to refresh them by recalling certain incidents that I, at any rate, had *not* forgotten !

There is quite enough Fascism in the world without its taint being extended to aviculture. There are honest dealers in the trade and there are dishonest ones ; there is good stuff being offered for the use of birds and there is plenty of rubbish. Let the good men and good articles prevail by fair and free advertisement of their merits, and let the bad suffer the exposure they deserve.

BREEDING SUCCESSES IN NEW ZEALAND

BREEDING THE PILEATED FINCH

We obtained a pair of these birds in June, 1935, and kept them in a large cage in the house until the following December, when they were liberated in a mixed aviary of Finches and Waxbills.

By the middle of January, they had built a nest in a low-growing privet bush in the open flight. The nest was small for the size of the birds, and beautifully made with soft pieces of wood fibre, unravelled rope, and pampas grass.

Two rather long, greyish-white eggs were laid and the hen only sat very closely for twelve days. At no time was the cock bird seen to take any turn on the nest, but he sat on a near-by branch most of the time and constantly fed the sitting hen.

On 31st January two young birds were hatched out, but the following Sunday we experienced a severe cyclone and, although the hen never left the nest during the storm, the young birds died two days later.

The parents immediately set about repairing the nest and, in about a week's time, the hen was again sitting on two eggs. Both eggs hatched, but after four or five days one young one disappeared. The other grew very rapidly and kept both birds busy feeding it. As soon as the young bird hatched, we observed the old birds became almost entirely insectivorous, and it was greatly owing to the kindness of Mr. G. Rowland Hutchinson, who helped us obtain large supplies of crickets and grasshoppers, that we were successful in rearing the young one.

On 8th March it left the nest when about two weeks old. For three days the parents kept it hidden in the undergrowth. As it was wet, stormy weather we were afraid we had lost it, but when they brought it out, it was well-feathered and could fly fairly well. It is now a fine young cock bird as big as its parents.

L. C. SPENCER.

BREEDING THE ORANGE BISHOP WEAVER

About three years ago, I bought two pairs of Orange Bishop Weavers out of colour. One cock came into colour and the other three birds proved to be hens. There was no attempt at breeding the first year and, in the winter, one bird got startled, flew into the wire netting, and fell dead with a broken neck. It was, of course, the cock.

In the spring the three hens all made nests, laid eggs, and sat ; but, as I was unable to get another cock, it meant another wasted season.

On 3rd October, 1936, I received a cock Orange Bishop from the Avicultural Society and turned him into the aviary with the hens and a mixed collection of Finches. On 31st October there was a nest with two eggs, and I found pieces of broken shell on the ground on 18th November, so conclude a chick hatched that morning.

They were quite strong little birds, perfectly feathered except for a stumpy tail. They were unmistakably Orange Bishops and sat flirting their wings in the characteristic manner. They were eating soaked seeds and fending for themselves by 4th December, and I consider were independent at that date.

Now for some general notes. The cock takes no part whatever either in incubating the eggs or in feeding the young ones, nor did I ever see him feeding the hens. He is a very busy builder, but the hens seem to prefer nests that they construct themselves. In only one case has a hen sat in a nest that the cock built, and that had direful results. He built out in the flight in some tall grass-stalks and, although I tried to protect the nest from above, a heavy downpour of rain one night caused it to tip over and two eggs on the eve of hatching were thrown out.

The usual clutch seems to be two eggs. They are a rather deep blue in colour with no markings. The nest is pocket-shaped and hangs from tea-tree twigs. It looks very frail, but is, in reality, very strong and tough, being woven of grass-stems and fibre. The mother starts weaving again as soon as the young are flown, not using the same nest a second time.

They had the usual seeds necessary in a mixed aviary as well as

soaked seed, with a little soft food daily and small gentles occasionally. I could not spare them any mealworms as there were three baby Shamas to be provided for as well when the first nest hatched. To date, 12th March, there have been six nests, the last one having eggs due to hatch in a week's time. The first brood have moulted, but are not showing any signs of sex difference in the feathering.

MRS. E. BULLOCK.

BREEDING OF BLUE MOUNTAIN LORIKEET

My Blue Mountain Lorikeets are in a large aviary together with all my other Parrots and Parrakeets. About the middle of October, I noticed a pair going in and out of a log box, so on peeping through a crack I saw three eggs. Naturally, I was very excited, and it was with some difficulty that I restrained my curiosity. The birds did not sit closely but seemed to be popping in and out of the nest much of the time. On the 1st November, when passing the log, I heard something squeak, but naturally I did not look in, as I was afraid the hen might leave the youngsters.

I was able to restrain my curiosity for a considerable time, but one day it got the better of me, and on looking in all I could see was a heap of grey wool, not much in reality to have broken my vow to myself by looking into the nest. On looking into the nest again about a week later, imagine my surprise when I saw two small heads looking around everywhere. The youngsters did not show any signs of feathers until they were four weeks old, and even then were very slow in feathering up.

At the end of two months they were fully feathered. On Christmas morning, they were looking round for their Christmas-box by putting their heads over the top of the nest, and by New Year's Day they both came out of it, as big as the parents, and at the moment they are flying around in the aviary as well as an adult bird.

On 20th November they were independent, feeding themselves on the nectar, bread, and eating sunflower seed. In appearance they are very much like their parents, almost as big, but much paler. They were fed only once a day with nectar put into a drinking vessel as well as a slice of bread, and then nectar was poured over the bread. Previous

to hatching, the parents were given apples, dates, the usual Parrakeet mixture, Budgerigar mixture, and green foods. The nectar and bread mixture was added just before the young were due to hatch.

For your further information, the pair of Lorikeets are again thinking of nesting, while their two youngsters are very active indeed in the aviary.

MRS. E. JONES.

BREEDING OF GALAH PARROT

Three eggs were laid between the 21st and 25th August, 1935. One young was hatched on 16th September, and left the nest on 7th November.

J. SMITH.

(For further details see "*Breeding Notes from Mr. Smith's Aviaries*".)

BREEDING OF ROYAL STARLINGS

These birds were acquired from one of the importations for the Society. One young one was bred in the 1935 season.

The birds chose as a nesting site a hollow puriri log, the opening having a diameter not much more than 3 inches, and apparently a little on the small size for the size of the bird. The opening of the log was towards the passage-way in the aviary. The other end of the log was blocked by a piece of wood, forming a rather good nesting hollow. This was lined almost exclusively with white, soft fowl feathers.

Being away at the time, I cannot give full details, but young definitely were hatched on 6th January, 1935. In all, it is thought that four young were hatched, but successively three young ones died, leaving one only in the nest. The food was mealworms, gentles, mincemeat, grasshoppers and spiders, in addition to the usual soft-bill mixture. The parents were very attentive to the young, and the loss of the three other youngsters was probably on account of insufficient live food to support that number. When the aviary attendant came with mealworms each two hours, the parent birds were waiting for him at the gate, evidently listening for the outside gate to be opened.

The birds refused crickets for some reason, which is rather unusual, as crickets usually appeal to insect-eating birds. The young Royal left the nest when approximately three weeks old, and the parents continued to feed it for some time. The bird, however, was completely independent by the 14th February, 1935. The young was feathered very much like the parents, only paler in colour and with a black iris instead of white, as in the adult. This iris is a definite sign of age, for it takes over a year for its change to white. The yellow on the breast of the young was very pale in colour, but at the end of approximately a year, assumed the brilliant yellow of the adult.

The young must continue to grow for more than a year for, although at the end of that period there is very little difference in the colouring, there is some difference in the size. It appears that it would not attain its adult proportions under eighteen months. The following year the same pair of birds went to nest and again succeeded in rearing a young one, which ultimately was exhibited at the Grand National Show in 1937 and secured the Presidents' Breeders' Trophy.

G. ROWLAND HUTCHINSON.

BREEDING OF INDIAN SHAMA

The parents were bought from an Eastern importation in 1934. They were released later on in the year in a large aviary in which was erected a vertical punga stem with in it a hole scooped out about 5 inches in diameter. A small amount of horse-hair and a few bamboo leaves were deposited on the bottom of the hollow. Ultimately, four eggs were laid and hatched out. The young were deposited the same day as hatched on the path in the aviary—dead. 1934 was a failure. It would not have been if more knowledge of the species and experience had been possessed by myself.

On Sunday, 13th October, 1935, a pair of Shamas were turned into an aviary by themselves with several nest-boxes hung up, including one covered with willow bark and all nicely smeared with mud. On 27th October the hen Shama was noticed with fine hay in her beak. On 10th November the hen Shama was sitting on the nest, the base of which contained a few leaves, principally bamboo leaves, and the

nest itself inside the box was made of horse-hair carefully formed into a neat cup. On Sunday, 17th November, three young and one egg still unhatched were noticed. The weather was abominable, with rain, wind, and cold. The next day two day-old Shamas were found still alive on the concrete floor of the shelter in which was the food of the parent birds.

These were replaced in the nest with the third one, which was still there, and the cock bird immediately removed from the aviary. The removal of the cock before the young Shamas are hatched is the real secret of breeding Shamas in captivity. The hen bird continued feeding gentles, mealworms, and an assortment of live insects such as slaters and spiders to the three young ones. Probably she found some earthworms in the large grass aviary and other insects living in the herbage. Mincemeat well moistened with water (a tip picked up in England from Mr. Sydney Porter) was offered fresh daily. Considerable quantities of mincemeat were consumed as the birds grew in size. The gentles and mealworms were offered four times a day, but as the supply of gentles increased, a large pot of them was left in the shelter all the time.

On Sunday, 24th November, I looked in the nest and the three young were doing well. Their eyes were still closed, but their flight feathers were growing strongly and evenly and encased in very long quills. The skin of the birds had a distinctly greasy look and was coloured dark brown. The nest itself was kept perfectly clean, and the hen was very industrious in taking away the voidings and dropping them in a corner of the shelter on a piece of paper which was kept there for the purpose and changed daily. The voidings were encased in a film of sufficient strength to sustain the force of being dropped over 12 inches and still remaining intact.

The quantity of mincemeat consumed increased daily. The hen "killed" the mincemeat by knocking it on the ground before taking it to the nestlings. On Friday, 29th November, late in the evening, the three young Shamas made a great noise and left the nest, alighting on a peach tree about 4 feet from the nest. At dusk they were forcibly returned to the nest, as the weather was not promising and, after doing this, the hen immediately gave them all a meal of mealworms.

Next morning, however, the three youngsters were out again bright and early.

During the next three days, they commenced to fly round the aviary, two being particularly strong on the wing. Food given all the time was the usual prepared Shama food together with mincemeat well wetted, and the range of insects already mentioned. The young were considerably paler than the hen on the breast, but totally different on the head and neck, which, on a dark background, is covered with rows of brown feathers, giving a mottled appearance. The wing feathers also were mottled, but the rump, instead of white as in the adult, was jet black. The legs were pale flesh colour and the eyes very big and black, with a light brown eye streak. The young Shama is a splendid example of nature's protective colouring, and providing they remained still, it was almost impossible to see the young birds in an aviary containing growing vegetation, brilliant sunlight still further increasing the difficulty of seeing them owing to their appearance still further blending with alternating sunlight and shadow. I have looked for minutes at a time in bright sunlight at a peach tree in full foliage with long grass growing up to its lower branches, and failed to locate the young Shammas perched on its branches until they themselves drew attention to their presence by their distinctive chirp and the flick of their absurd little tails. The green and yellow leaves of the grass, combined with bright sunlight and shadows of the peach tree leaves, provided a background against which the broken, mottled appearance of the youngsters made them invisible.

As the birds grew, the white side tail feathers developed rapidly and, with tails 2 inches to $2\frac{1}{2}$ inches long, these white feathers were most noticeable. The black centre tail feathers now grew rapidly and soon almost concealed the white feathers of the tail. On 15th December, 1935, the Shama hen was sitting on three more eggs, so I concluded that before that date the young were independent.

The sex can be distinguished with almost certain accuracy when a few weeks old, by noticing the definite colour on the breast, the cocks having a decidedly darker hue than the hens. It being necessary to remove the cock bird when the hen had been sitting from ten to twelve days and then allowing her to rear the young ones, it usually happens

that she lays a clutch of clear eggs before you are certain that the youngsters are independent. Laying eggs is not so much a strain on the bird as is the feeding of the young.

Indian Shamas were bred again in 1936, when an aviary bred cock bird was mated with an imported hen and reared healthy youngsters. Shamas are most delightful birds, combining as they do a most beautiful song, pleasing shape, and graceful movement together with rich brown colours, black, and white. Their elongated tails give them the appearance of monster Fantails. They are hardy birds and live outdoors in Auckland throughout the winter.

G. ROWLAND HUTCHINSON.

BREEDING OF YELLOW-WING SUGAR BIRD

During a trip to England at the beginning of 1935, I passed through the Panama Canal and, while there, secured a small number of various Central and South American birds. Most of these arrived safely in London and were landed with a remarkable freedom of red tape and absence of official inquisitiveness, at any rate, to one well versed in the ways of New Zealand officials. In London they found temporary housing in the quarantine department of the London Zoo, thanks to the generosity of Mr. Seth-Smith, F.Z.S., Curator of Birds.

A room, 16 feet by 10 feet, with a permanent temperature of 65° F. was placed at my disposal free of charge, so that the South American birds had a few days to recover from the voyage and were fed upon an attractive shore diet. One morning, after they all had time to feed, they were placed in several small cages on the back seat of Mr. Sydney Porter's car, entirely regardless of the upholstery. We left London about midday for Derby, a distance of about five hours' journey by road in mid-winter. It was well that the birds had had ample time to feed before leaving the warm Zoo quarters, and had full cups before departure.

During the run north, the weather conditions became worse. Heavy, dull clouds obscured the sky. Sunshine and cloudless skies so lately enjoyed on the voyage were a delight of the past. Getting on to the higher country, snow began to fall and, before long, the only spot

on the windscreen kept clear was that under the arm of the mechanical wiper. Driving was no sinecure—the road was slippery, vision obscured, and the back of the car absolutely filled with cages, some of which had to be held in position with out-stretched arm all the journey.

Now, this is a bird story, but fish must be introduced. Before leaving London, a call was made at Gamage's and a pair of Angel fish secured. These required a temperature of round about 60 to 70° to be comfortable. The warmest place that we could think of to keep them during the trip was securely wedged between ourselves and the seat, while, at the few stops we did make, warm water was added to the contents. The fish had to have some air, however, and the lid was not tightly fitted. Moisture developed on the seat and later penetrated our clothing, but still we stuck to the job and, between us, kept the Angel fish warm. This, however, is just by the way.

The snow-storm through which we were passing became heavier and even the wiper had to be cleared every now and then as the weight of snow on it and the increasing thickness proved too great for its motive power. There were even, to my mind at least, visions of motorists stranded all night, held in by snowdrifts, gradually freezing to death in company with a strange assortment of tropical birds and, between them, a can of tropical fish found in a block of frozen ice! Even Sherlock Holmes would have been puzzled to explain the presence of an Englishman and a New Zealander and such a cargo frozen stiff miles from nowhere.

Fate, however, was on our side and, after an hour or so of slow, steady progress with frequent stops to clear the snow from the windscreen and make sure the precious bird cargo was still well-covered with sacks and coats, and getting what warmth it could from the engine, the snow ceased falling and a high, cold wind took its place. Fortunately we could keep the car windows tightly closed all the time, otherwise I dread to think of the results. The atmosphere cleared, the countryside was covered by a blanket of white, and the wind proceeded to remove any warmth anywhere remaining after the descent of the snow. The only heat was from the faithful engine and even internal warmth, from solid or liquid refreshment, was impossible, as it was essential to push on without a break for meals to get our so-called "delicate"

cargo to Derby and warm bird-rooms before dark. The dirty sky promised a bad night for road travellers.

The weather cleared somewhat, and greater pace was made in an endeavour to get through before darkness descended. Mr. Porter, who was driving, succeeded, and shortly the lights of Derby were in front. Soon, the strangers from afar were given an exceptionally cordial welcome by Mr. and Mrs. Porter and family. The first care was the delicate cargo. Unpacking proceeded rapidly and the whole of the hall-way, with its antique furniture, was soon covered with cages of birds and bird gear. Attention was first given to several very sick Tanagers that Mr. Porter had bought in London, in an endeavour to save their lives, or, at any rate, give them a few days or weeks of comfort before they passed on to happy feeding grounds.

The birds were put in warm quarters already prepared for them, and certainly very few were showing any ill-effects of the arduous trip north from London. In the morning, only two had succumbed. In actual fact, the birds' attendants had suffered more than the birds, for both Mr. Porter and myself nursed bad colds for several weeks while the birds had fully recovered in twenty-four hours. In Mr. Porter's bird-room the birds spent the winter and the spring of 1935, until once again they set out on a long voyage, this time in May, 1935, to New Zealand, leaving London on the coldest 16th May that England had experienced for many years. Snow fell at Victoria Station that day!

The numerous official requirements for New Zealand were completed during the afternoon and, after a farewell dinner with friends that night, I went aboard the ship round about 10 o'clock, happy that I was on my way back to good old New Zealand and sorrowful that I was parting company with the wonderful friends that I had made during my busy stay in the Old Country. Next day, going down the Channel, we heard that enormous damage had been done all over England by an unprecedented late fall of snow in what was really mid-spring. The birds, however, were made snug in their quarters 'tween decks, canvased off from draughts, and heated and lighted by numerous clusters of ship's lights. There they were well protected from the boisterous weather during the run down to warmer climates—and there in those quarters, let it be added, I worked with birds as

I had never yet and I trust never will again. Ten hours a day for a few days on end doing nothing but feeding, watering, cleaning, and spraying birds is quite a light task and a very welcome break in a life given to totally different affairs, but when the days drag on over thirty and the hours are just as long and the temperature gradually rises and then suddenly falls towards the end of the voyage—that is another story. The temperature ranged from 94° F. during the passage in the Panama Canal to 45° F. on arrival in Wellington. Sufficient to add that the bird attendant was regarded by those on the boat as slightly “mental”. The usual pleasures, companionships, and flirtations of an ocean voyage did not appeal; and, in any case, any individual who put in ten hours a day, most of it ’tween decks and part of it in the hospital aft looking after birds and fish, must be mental.

The attendant did survive the voyage, however, even at the loss of approximately a stone in weight but, so far, has developed no more serious symptoms of being unbalanced mentally. The difficulties and dangers of the sea voyage being over on arrival at the inhospitable port of windy Wellington, the trials and tribulations of entering this autocratic country had to be faced and eventually overcome, thanks to the assistance of my friends, the late Mr. A. E. Henley and Mr. J. Black, of Dunedin. All difficulties, transport arrangements, etc., were smoothly adjusted and the birds came to Auckland in a mail van accompanied by the late Mr. Henley, who remained up the whole of the night to see that nothing untoward happened to them on the journey, particularly as, in addition to the steam heat, we used every bit of gas in the cylinder on the mail-van by keeping the gas-ring burning all the time to its fullest extent. Only approaching Auckland, at Westfield, did the gas give out.

On arrival at this city, the birds were accommodated at the aviary of an aviculturist experienced in attending to their needs. After several weeks, the distribution of the consignment was completed, many of the birds being distributed to aviculturists who had requested the individual species previous to my departure for England.

Two pairs of the last of the consignment of Yellow-wing Sugar Birds were bought by the writer, kept indoors all the remainder of the hostile winter of 1935, and one pair was released in each of two

aviaries on 6th October, 1935. In one enclosure were yellow Kowhai blossoms. The birds immediately started sucking the nectar and apparently eating a small amount of the pollen, while, in another enclosure, the Sugar Birds taught a pair of Giraud's Orioles how to obtain nectar and pollen from apple blossoms and, incidentally, to so damage the flowers that there were not many apples that year.

The Sugar Birds were fed on the usual Sun-bird mixture, prepared soft-bill food as used for Shamas, and a variety of soft fruit in season, grapes, oranges, pears, and bananas being the principal fruits used, with occasionally soaked seedless raisins and a piece of paw-paw when it was available. Sunlight, fresh air, plus food and exercise worked wonders with the birds and, after approximately twelve months' captivity in comparatively confined quarters in Panama, on board ship, in Mr. Sydney Porter's bird-rooms, and again on board ship coming out to New Zealand, the birds were in really good condition.

On Sunday, 17th November, 1935, the hen was observed playing with a piece of string as though nesting-inclined. However, the cock bird was not yet in full breeding condition with turquoise blue crest and deep blue body colouring. On Thursday, 26th December, 1935, the hen Sugar Bird was playing with soft white feathers, taking one in her beak and flying about with it. On Saturday, 28th December, she commenced picking up lengths of horsehair, and several were woven into a fork of the living tea-tree shrub growing alongside the path in the aviary, the commencement of the nest being situated about 10 inches beneath the top of this rather dense-growing shrub.

These few horsehairs were left in the fork for about a day, but on Tuesday, 31st December, a nest about $2\frac{1}{2}$ inches in diameter was made composed entirely of horsehair. The shape was much more spherical than many other birds' nests and the edges were decidedly incurving. The walls were thin at the incurved tip, but gradually thickened to the base, although the texture was so open that the contents were always visible through the sides of the structure. The nest seemed to be hung by horsehairs fastened on to one prong of the fork through the nest and, though resting its weight on the wood, it was really secured in position by these stays of horsehair tying the nest to other portions of the shrub. The fork, therefore, was used as a support into which to weave a nest, and not as a foundation on which to secure it.

On the evening of 31st December, the hen was seen sitting well down in her little home. The weather was very windy and wet, but not cold. As the wind and rain increased, the hen settled further down in her nest and depressed her beak considerably. It was noticeable that, in passing along the path past the nest, the hen took no notice providing the passer-by looked straight ahead. Should the head be turned and the eyes directed towards her, she flew off immediately. On Saturday, 10th January, 1936, the hen being off the nest, a glance sideways revealed two eggs, pale bluish-white, speckled with reddish-brown markings which were more dense at the big end of the egg.

On Sunday, 11th January, one egg hatched in the morning and the second in the afternoon, revealing two of the tiniest young birds I have ever seen, covered with very little down and almost naked, with no evidence of the long bill of the adult. Incubation, therefore, was approximately twelve days. On 19th January, the young birds would raise their heads quickly if the hen were off the nest and the tree shaken a little, the movement apparently being connected with the supposed return of the hen. The flight feathers were growing strongly and evenly, but not broken out of the quill covering as yet. A little bit of fluff was noticeable on the chicks, but insufficient to provide much warmth.

The hen brooded them well, as she needed to, owing to the abnormal amount of cold, wet weather. The hen was observed chasing flies and moths in the aviary, but the cock bird was not seen performing any domestic duties whatever. On 19th January the hen was seen eating crumbs of Madeira cake from the soft-billed food supplied them, then taking a drink of nectar and then pieces of boiled egg or cake in her beak to feed to the young. In approaching the nest with food, the hen always did so through the bottom branches of the tea-tree—never from the top, which was composed only of slender, frail tea-tree shoots. Not once was the hen seen to approach the nest directly.

Fruit in addition to the usual foods already mentioned was fed, cut-up grapes, pears, oranges, and soaked seedless raisins. Gentles were offered, but on no occasion were they seen to be used. Nectar to moisten the other foods was consumed in considerable quantities. On Thursday, 23rd January, the chicks' eyes opened and greenish feathers showed on their backs. On Monday, 26th January, one young

one hopped out of the nest early in the morning, perching upon a tea-tree twig about 4 inches from the nest. During the day, the second one followed, taking the position of the first, which had moved about 2 inches higher up on the shrub. They remained there the rest of the day.

The breast feathers showed very pale green, but the tail feathers were still in the pin feather stage, while the back was well covered. On Thursday, 30th January, the young birds were seen moving about the aviary somewhat freely. On this afternoon, when looking for the youngsters, I saw one with its head through $\frac{1}{2}$ in. link netting, apparently hurt. It could not have been there long, for a few moments before I saw it climbing into the netting. I rushed in and released the bird, as it could have done itself had it moved upwards at all or downwards, and placed it upon a branch. In a few moments it was calling continuously to its parents, who flew excitedly round it. I retreated from the aviary, but looked through a peep-hole, and saw the hen feed it almost immediately. Later, it looked tired and droopy, but next morning had almost recovered.

On Friday, the two youngsters spent the day in the Australian bottle-brush shrub. The next day, Saturday, a cyclone commenced to blow and on Sunday attained full cyclonic force. The memory of that disastrous period and the damage done all over New Zealand remains vividly with us even now. Salt spray blown many miles from the ocean together with the speed of the wind burnt vegetation in all exposed positions. These two young Sugar Birds had been away from the nest only a few days before this disastrous cyclone went its mad way over New Zealand. One youngster at least was seen alive on the Sunday afternoon. The little hen, faithful mother that she was, full of courage and dominated by her instinct to feed her young, battled with the wind and was seen several times to fly with her beak full of food to the young, somewhere sheltering in the long grass of the aviary.

Of avicultural interest, too, was the fact that the steamer on which Dr. Hopkinson, the Vice-President of the English Avicultural Society, was travelling was hove-to 100 miles from port instead of being safely at her moorings alongside the wharf.

After the cyclone, only one Sugar Bird was seen. On Sunday, 16th February, 1936, the Sugar Bird must have been almost independent,

for the hen commenced to think of building another nest. The young was a cock, the colour lighter than a hen. The bill by now was half the length of that of an adult, and the tail feathers almost full length. On Sunday, 23rd February, the young occasionally called for the hen to feed it, often without being satisfied. It quickly developed into a handsome young cock, assumed full colour next spring, and is now a happy inhabitant of a fellow aviculturist's aviary.

G. R. HUTCHINSON.

BLUE-WINGED PARROT

(*Neophema chrysostoma*)

SOMETHING NEW ?

By L. C. WEBBER

The following notes were sent to me by a naturalist friend in Tasmania, the result of past discussions on the above-named Parrot.

Avian equilibrium is a factor that must not be unduly disturbed and should be given very careful consideration.

Assimilative colouring as regards surroundings is also an important item at all times. These conditions could be suitably applied to Blue-wings.

Mating which commences about the end of October (Tas.) can be delayed or quickened by correct feeding. (This is not given.)

Fresh eggs (thirty-two) of this species were sent by me to Professor V. A. Khakhloff of the Tomsk University about ten years ago ; notwithstanding their being seven weeks in transit, he secured a hatch of twenty-one, and for several years now has had them breeding throughout the year, even during the severe Siberian winter (this suggests the birds are acclimatized, no mention is made of artificial heat), also, he has fixed eight definite colours. He claims that feeding is as important as mating.

The hatching in the first instance was per media of an incubator.

The professor has had up to four hatches per annum from some pairs, and clutches of eight are common.

The writer goes on—I have examined many scores of nests of this species over the past fifteen years and on two occasions only have I noted even eight eggs, the usual complement being six.

It is quite impossible to mistake Blue-wings for Orange Bellies (*N. chrysogaster*) ; they are entirely different, the latter is visibly larger, apart from the bright orange patch—almost scarlet in adult males, and am quite satisfied that “Sports” of the Blue-wing species are often mistaken by the “Layman” for the orange chaps, one of which must have been the specimen held by “X”.

I saw this “Sport” during my last trip to Tasmania, the owner claimed it to be the only *N. chrysogaster* in captivity. I doubted this as being so, as I had seen them both in aviary and native habitat on a previous occasion.

NESTING OF THE GABOON WEAVER

By MRS. GODDARD

Last spring I was fortunate enough to purchase a pair of Gaboon Weavers, I fancy they had at one time belonged to Major Appleby, but am not sure, anyhow I was told that these birds had never been bred in captivity, which was quite enough to fire me with the ambition to see if I could persuade them to produce a family. Directly I had them I turned them out into an outside aviary with a shelter ; in which I placed a small box, and on the ground I threw some rough grass. I fed the birds on millet, but added every day a small quantity of the soft insectivorous food, and a good supply of gentles and a few mealworms. To my joy the hen at once began to build, and in due course two eggs were laid. These were small and pure white. During the day the cock bird sat, the hen going on to the nest after having bathed in the evening. I can hardly describe my feelings, when on going to feed them one morning after the birds had been sitting about fourteen days, to find the hen dead on the floor of the flight, and one egg with a chick in it just on the point of hatching !

I sent the hen away for a post-mortem, which revealed the fact that she had a bump on the head, apparently caused by a blow. I can only think that she had been frightened by an Owl, of which there are a good many round here, and had struck her head against the wire netting ! Down fell all my hopes of “a medal” and I began to wonder why I keep birds !

A YOUNG HYBRID MACAW

By D. SETH-SMITH

The following letter referring to a hybrid Macaw reared in Essex is worth printing as an interesting record. The writer is Mr. J. L. Tuke, of 202 Hampton Road, Ilford :—

“The hen Macaw is coloured red and green, the male blue and yellow. Each year they have mated and the hen has laid eggs, most of which have been fertile, but failed to hatch. This year twelve eggs were laid and most of them contained dead young, but out of the last two laid one young bird has been hatched which is now well feathered and apparently very strong, with a good appetite. It has already torn a hole in the side of the shed with its beak and, unlike its parents, squawks at night, or rather in the early morning, loud enough to disturb neighbours three doors away. It has a blending of the colours of both parents, having red feathered head and breast and blue-green wings and tail.

“These birds are not caged, but kept in an ordinary garden shed, free to roam in the garden and house. The flight feathers of the old birds are clipped on one wing every six weeks. As yet the young one has not been able to walk out as its legs are not strong enough, but it has quite a large wing span and flaps its wings a great deal. Both parents feed the young one which is now eight weeks old.”

Hybrid Macaws have previously been bred in France, Germany, and New Zealand. Pure-bred blue and yellow as well as red and yellow Macaws have been reared in France, Australia, and Germany.

SUCCESSFUL BREEDING IN THE
ADELAIDE ZOOLOGICAL GARDENS.

By D. SETH-SMITH

In the last *Report* of the Zoological Society of South Australia it is stated that during the year under review (1936) 182 birds of thirty-eight different species were bred in the gardens, amongst those reared being several of the rarer Australian species, concerning the breeding of which the society is paying particular attention.

There are now twenty-nine separate breeding aviaries for Parrakeets, each designed to accommodate a single pair of birds and many of these regularly produce families each season. The most successful result was the rearing of no less than thirteen Queen Alexandra's Parrakeets from two breeding pairs.

Success has also been achieved with Splendid Grass Parrakeets. The last breeding hen unfortunately fractured her skull by some unknown means, but not until she had reared nineteen young.

The Adelaide collection now contains forty-eight of the fifty-nine species of the Parrot family known to exist in Australia.

Amongst foreign species the breeding of the Javan Parrakeet and the Green Conure, the Torres Strait, and Bartlett's Bleeding-heart Pigeons is recorded.

ORNAMENTAL PHEASANT SOCIETY NOTES

By JEROME LAMBERT

The January issue of the *O.P.S. Journal* is now published. We consider it our best to date. Our President, M. Delacour, continues his article on the distribution of Pheasants and three maps illustrate this most interesting series. Monsieur Malisoux has surpassed himself by a masterly exposition of reasons for that bugbear of all aviculturists "Dead in the shell". Such a scientific thesis on this matter has never previously been written and not only does he give us his reasons for these deaths but he also informs us that very frequently one can save such a chick by artificial methods and he gives us minute details of the procedure together with illustrations. The article is thoroughly convincing and will create intense interest and wonder, not only amongst phasianists, but all aviculturists. It is undoubtedly a discovery that will have far-reaching effects. Many other articles are featured and I would particularly mention Professor Ghigi's. All members of this Society will know of this learned aviculturist and indeed only last month Mr. Mackie gave us a most interesting account of his visit to Bologna. Now Professor Ghigi himself has a chat with us. Dr Evald warns readers of pitfalls that await all phasianists. Mr. Sibley of

America who is the untiring Secretary of the American O.P.S. provides us with food for thought. There are several other important features, perhaps the most interesting of which are seven essays written by our lady members on matters relating to pheasant life. The Society presented valuable prizes for the first, second and third and your Editor, Miss Chawner, very kindly acted as judge. I would also mention the publication of two magnificent coloured plates, they depict the Crested Argus (Rheinhardt's) Pheasant and the Mikado Pheasant. We are proud of these plates and must thank our President for kindly presenting them for publication. It is again my pleasure to inform members of the Avicultural Society that if a copy of this Journal is desired, then a post card to me will result in a copy being sent by return of post.

CORRESPONDENCE

A FINE SONGSTER

MADAM,—I was much interested in Mr. A. Hampe's account of "Singing Birds in the Far East" in the November issue of the Magazine, especially as I possess one of the most glorious songsters imaginable in a Spectacled Laughing Thrush. This bird was brought over by Mr. A. Chaplin when he was out on Lord Moyne's yacht in 1936, and I bought it from him a few months after its arrival here. It is a bird full of character, but not always good tempered. He loves men, and if a man comes into the room will immediately show off, fluttering his wings and singing his loudest. At times he can be very bad tempered with me, and I have to clean him with gloves on or his sharp beak would soon draw blood. At other times he will be perfectly docile, letting me take him in my hands and stroke him. He rarely sings when I am in the room, but starts the moment I leave it. He seems to have many different kinds of song. In the morning when first uncovered he sings rather like a thrush. At sunset and sometimes in the evening he is much more like a nightingale. He can imitate the crowing of a cock and a hen after laying an egg as well as the mew of a cat.

He gets very excited at times, flying to and fro and throwing his tail back over his back, I can never be quite sure whether this means rage or pleasure—perhaps Mr. Hampe can tell me. In song he certainly surpasses any Shama I have ever heard and is so lively and full of character. He loves to play with a piece of paper, picking it up and letting it fall over and over again. Altogether he is one of the most delightful and charming pets I have ever possessed.

E. MAUD KNOBEL.

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SALE AND EXCHANGE

I CAN offer many species of Ornamental Pheasants, including 1937 Satyr Tragopans, Mikado, Brown Crossoptilon, Elliot's, White-crested and Nepal Kaleege, Vieillot Firebacks and other rare Pheasants; also varieties in Waders.—Please write for prices and particulars, LAMBERT, Nawton, Yorks.

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sub

THE AVICULTURAL MAGAZINE



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THE AVICULTURAL SOCIETY

FOUNDED 1894

NOTICE TO MEMBERS

The Subscription to the Avicultural Society is £1 per annum, due on the 1st of January in each year, and is payable in advance. The entrance fee is 10/-. The *Avicultural Magazine* is sent free to members monthly. Members joining at any time during the year are entitled to the back numbers for the current year, on the payment of entrance fee and subscription.

ALL SUBSCRIPTIONS SHOULD BE SENT TO THE HONORARY SECRETARY AND TREASURER, MISS KNOBEL, 86 Regent's Park Road, London, N.W. 1.

All Queries respecting Birds (except post-mortem cases) and all other correspondence should be sent to the Hon. Secretary at the above address. Any change of address should be notified to her.

POST-MORTEM EXAMINATIONS

Rule 1.—A short account of the illness should accompany the specimen. All birds to be sent as fresh as possible to Mr. C. H. HICKS, The Zoological Society of London, Regent's Park, London, N.W. 8.

Rule 2.—A stamped addressed envelope must be enclosed with the bird.

Rule 3.—No body or skin of any bird will be returned under any circumstances whatever.

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All communications intended for publication in the Magazine should be addressed to the Editor:—

MISS E. F. CHAWNER,
The White House,
Leckford,
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Mountain Bluebird.
Sialia currucoides.

THE AVICULTURAL MAGAZINE

THE JOURNAL OF THE
AVICULTURAL SOCIETY

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FEBRUARY, 1938.

THE ARCTIC OR MOUNTAIN BLUEBIRD

(*Sialia corrucoides*)

It is many years since Bluebirds were freely imported into Europe and it is only owing to his world-wide reputation as an exceptionally distinguished ornithologist and keeper of rare birds that Monsieur Delacour was allowed to bring two pairs of the Mountain Bluebird to Europe. It is acknowledged to be the most beautiful member of its exquisite family and is as familiar and charming in its own country as our Redbreast is here. It lives almost entirely on insects, and takes very little fruit and that mostly wild, so is entirely beneficial and deservedly protected.

It is found in Western North America, and in Canada from the west coast east to Manitoba, north to the Yukon and Mackenzie Valley.

Its juvenile plumage resembles that of the other two species, brownish-blue back flecked with white spots, throat spotted with deep brown and white. Only the wings and tail show definite blue, and this is much lighter than in the young of either the Eastern or the Western species.

E. F. C.

THE BREEDING OF THE TAHITI BLUE LORY

(Coriphilus peruvianus)

By THE MARQUESS OF TAVISTOCK

The successful breeding of this rare, lovely, and most interesting little bird is not only the greatest triumph of my avicultural career (albeit the lion's share of the credit belongs to my former aviary attendant, Mr. J. Yealland !) but is also, in many ways, the most unexpected.

In the first place, I never expected to see Blue Lories alive at all, as, when I was preparing supplementary work for the second edition of my book on Parrots, I found that the skins of both species of *Coriphilus* had been relegated to the department of the Natural History Museum where extinct birds are kept, as the authorities at that time believed that they had probably joined the ranks of the Dodo.

Even if the *Coriphilus* were still in existence, it seemed in the highest degree improbable that they would ever be introduced to aviculture, as their habitat lies far from the sphere of operations even of our most enterprising collectors.

When, as related elsewhere, through the kindness of Mr. Guild, the birds *did* unexpectedly make their appearance, further difficulties arose with regard to correct feeding, and I was absolutely in despair when, after many experiments, Mr. Yealland at last discovered the food that really suits them—Dr. Allison's, prepared as for other Lories, but then diluted with its own volume of water ; together with apple, pear, grapes, and a few meal-worms. Of these latter, although probably quite an unnatural diet, the *Peruvianus* have become exceedingly fond, although the Goupil's or Ultramarine Lories rather unfortunately will not touch them.

Even when the problem of diet had been solved, the chances of breeding appeared almost as remote as ever. Even the larger and commoner Lories are not the easiest of their tribe to raise, and I had a presentiment, fortunately unfulfilled, that, if they laid, the eggs would certainly prove infertile, as has been the case with every species of Hanging Parrot which has nested in my aviaries.

Furthermore, owing to the presumed delicacy of the birds, although

I have never bred healthy young from any kind of Parrakeet when the nest was in a heated aviary shelter, I did not dare to put the Lories' tree-trunk in the open flight.

Finally, December is not exactly the ideal month for the youngster of a tropical species to leave the nest !

However, it is the unexpected that happens (usually, though fortunately not always, in an unpleasant fashion !) in aviculture, as well as in other ventures of life !

For the benefit of those who have not seen the species, a brief description may be desirable. *Coriphilus peruvianus* is quite a little bird, only about half as large again as a Sparrow, and the tail, as in other Lories, is wedge-shaped and fairly short. The plumage of the adults of both sexes, when they are in good condition and are able to bathe in the rain, is a glorious dark blue with a high gloss on the feathers. Under the throat is a very large snow-white bib and the feet and beak are yellow, more orange in the cock than in the hen. Some of the head feathers, which are often carried slightly raised, are, as in some other small and rare Lories, unusually broad and shiny. The eyes are dark and very small.

Being under the necessity of moving my aviaries from Peasmarsh to Haywards Heath, summer was well advanced before the Lories' quarters were ready for their occupation. As an experiment, I had a special range of aviaries constructed for them, with tiled floors for both shelter and flight. These have proved most satisfactory and are very easy to clean. The measurements are : flight, 12 by 10 by 7 ft. high ; and shelter, 10 by 5 by 7 ft. high. The shelter is thermostatically heated in winter, when a temperature of from 65 to 73° Fahrenheit is maintained, and artificial lighting is provided when the days are short and young birds are being reared. For the nest, I used a natural tree-trunk about 6 feet high and entirely hollow. The interior was filled with peat to within a foot or so of the entrance hole and on the top of the peat were a few inches of decayed wood. The base of the tree-trunk stood in a shallow vessel of water. Incidentally, it is very desirable to have a deep layer of clean absorbent material in a Lory's nest, on account of the liquid nature of the droppings.

During last winter I had to separate the hen Lory from her mate,

as he showed a disposition, apparently common in males of his species, to attack his mate suddenly and viciously, even after appearing just before on the most friendly terms with her. It may be that this trouble only occurs when the hen is not in breeding condition and the cock is, as latterly the relations of the couple have been much more harmonious. Although the cock Lory was a nice specimen, the hen at first was not a particularly good bird and would not bathe, and I regarded her as a *most* unlikely proposition from the breeding point of view !

When the aviaries were at last ready, I put the couple of *peruvianus* in adjoining partitions and kept them separated for several weeks, until the hen seemed anxious to join her mate and he was feeding her through the wire netting. When I put them together, as already stated, they agreed quite well and often played together in the puppyish fashion common to the Lory family.

The nest was put in in September, and towards the end of the month I heard with surprise that the pair were taking a considerable amount of interest in it. A little later, with even more surprise, I heard that two eggs had been laid (the normal clutch for this species), but the greatest thrill of all occurred between three and four weeks later, when the news reached me that a young one had actually hatched, the other egg having been slightly damaged and therefore having produced nothing. I accepted it as a foregone conclusion that the next bit of news would be the report of the young bird's untimely death, but instead of that, to my never-ending amazement, it both thrived and grew !

The habits of the old birds during incubation were interesting. I expected, either that both would spend a great deal of time on the nest or that the hen would do all the sitting, being fed by her mate. Instead of that, they took turns at incubating, and when the baby was quite small, it was the mother who appeared to do most of the foraging for food, while the father stayed at home and looked after the nestling.

Unlike most members of the slow-growing genus, the little Lory matured rapidly, and was out of the nest about eight weeks after the first egg had been laid. When he was about three weeks' old, with some trepidation, I decided to have a look at him. His parents,

fortunately, were quite unmoved by our investigations, and continued eating meal-worms without any display of anxiety or resentment. (Incidentally, they were allowed four meal-worms each a day and would have eaten more, although we did not consider it prudent to indulge them.) When the top of the nest had been removed and the electric torch directed into its dark interior, I saw, instead of the half-expected corpse, a sturdy little blackamoor sitting up in one corner; for the baby Lory, instead of being clothed in white or yellowish down, like all other little Parrakeets I have seen who have possessed any clothes at all, was almost as black as a baby Moorhen!

The happy day at length arrived when, on looking into the aviary shelter, a dark form flew from one side of the aviary to the other, which was not that of either of the parents. The young bird was as fine, strong, and well-grown as anything in the Parrakeet line that I have ever reared, even under the most favourable conditions. His plumage was blue-black, somewhat less brilliant than that of the parents. He had some streaks and blotches of greyish-white on that area of his person where his bib should later appear, and his beak and feet are at present blackish.

At the time of writing, he is feeding himself, and his future presents somewhat of a problem, as I rather think the parents have laid again, and I do not quite know whether to risk moving him or not. Knowing his father's uncertain temper, I am a little afraid of leaving him too long, although I must admit that so far, the cock is behaving like a model parent. We have not had a chance of looking inside the nest to make sure whether a second clutch of eggs has appeared, but, if they have, the arrangements for their incubation have been rather peculiar, as sometimes both old birds are on the nest; sometimes the hen; sometimes the cock; and sometimes the baby himself, although for quite a long time after first emerging he did not enter the tree-trunk at all!

I have already referred to the feeding which has suited my Blue Lories so well. In addition to the articles of diet already mentioned, they occasionally chew up grass and eat a little earth from the space left open in the tiles for the maintenance of a supply of these delicacies.

When the weather is very severe, the Blue Lories do not often

venture into the open flight, although they will sometimes come out and have a vigorous rain bath, when the temperature is decidedly low.

Although they are active climbers, Blue Lories have a strangely weak and laboured flight, exactly like that of a very sick or young bird. It is clear that in their own restricted habitat they never have to do much more than move from one branch to another, and gales of wind, I imagine, must be practically non-existent in Tahiti. At the present time, both species of these lovely little Lories are confined to certain tiny and remote coral islets, a plague of rats having exterminated them in other parts of their limited range. It is, therefore, greatly to be hoped that every effort will be made to preserve them in captivity in the not improbable event of their dying out completely in their native land. Eggs have, I believe, been laid recently in America and also in the collection of Dr. Derscheid, in Belgium, where I hope Mr. Yealland will be able to continue the success with the species which he has begun so well in England.

BREEDING RESULTS FOR 1937 AT DELMONDEN MANOR

By MAURICE AMSLER, M.B., F.Z.S.

This is the season when I usually oblige our Editor with some copy and depress my fellow members with a recital of many failures and a few successes. The past year has been quite an average one as regards numbers fully reared, but very much the reverse if one were to work out the percentage of birds reared from those hatched.

Last year, my first experience in the breeding of Pheasants, I reported two Amherst fully reared as the grand total from some eight or ten chicks hatched—this failure, it may be remembered, was due to the misbehaviour of one of my dogs—which had to go ; my present dogs are now perfectly trained, in fact they only reluctantly follow me when I am walking round feeding the young Pheasants.

Notwithstanding this I have had more than my share of losses among these birds—about twenty Amhersts were reared, the total should have been quite double this number ; of Elliot's I only brought

one through, out of eight lusty youngsters, and exactly the same may be said of Peacock Pheasants or Chinkis. I have little doubt that rats and stoats accounted for most of my losses—the broods just became gradually smaller. Elliot's naturally suffered the most because not only are they somewhat wild with their keeper, but they are also inveterate wanderers; some of my young birds, long before they were entirely weaned from their foster-mother, used to wander right away into adjacent fields, which were not my property.

As against this feature, young Peacock Pheasants are seldom seen more than three or four yards distant from their home coop—but I think this species is delicate in the early stages, at any rate this was my own experience; also they are dreadfully pugnacious. None the less they are quite my favourites.

Although in this species the hen only lays two eggs to the clutch the process is repeated, provided the eggs are taken away, and my little hen produced ten eggs altogether. Reeve's are easy and the chicks are wonderfully tame and intelligent from the very first. Edward's arrived too late for me to expect any eggs.

I have learned a good deal about the rearing of game birds during the past two years,—all by dint of asking questions, and most of what I know has been accumulated by pestering a near neighbour, Mr. Philip Guest, of the Moor Game Farm, who rears some 3,000 Pheasants yearly among which may be numbered a goodly proportion of the so-called fancy or ornamental Pheasants.

When the breeding season approaches the cocks of some species even if provided with three or more hens are inclined to be spiteful to the point of murder, and the usual advice given is to provide plenty of brushwood and such-like as "hides" for the hens—in practice these refuges may be the hen's undoing as she may find herself in a *cul-de-sac* where the male has her at his mercy.

My own plan has been to cut the flight feathers of one wing in the male or to "tie" the wing. The hens soon learn that they are safe if they get on a high perch and do so the moment the male begins to be troublesome.

The males again are the worst culprits as regards egg-eating. As the hens usually lay from 5 o'clock onwards in the evening it is easy,

if one has a shelter to the aviary, to drive the cock in each morning and not to liberate him until the eggs have been collected last thing in the evening.

There are different opinions as to the storage of eggs until one has enough for a sitting—many people stand the eggs point down in bran, but as the result of a good deal of inquiry from experienced breeders I pack my eggs in wood-wool in tin boxes and each day the box is turned over completely—all the eggs thus get a turn each day.

All eggs are examined about the eighth day of incubation, and infertile ones removed.

The broodies, by the way, should be carefully chosen; any with scaly legs should be discarded, and all, whether one's own or borrowed, should be smothered with pyrethrum powder or Keating's, both while on the dummy eggs and also a day or two before hatching. This application should be more especially applied along the back, rump, and just under the wings. When the eggs begin to chip the hen is left on the nest and gets neither food nor water even if the process takes a day or a day and a half.

After this length of time it may be assumed that any unhatched eggs only contain dead chicks—the youngsters are then collected by hand, placed in a warm box, indoors if the weather is cold, and the foster-mother taken out and given a good feed and drink, after which she is replaced in her box and her family is returned to her until they are all quite dry.

The next step is the removal to a coop. All beginners, like myself, wish to feed the chicks quite early, but it is a well-known fact that they are best without either food or water for twenty-four to thirty-six hours, there being sufficient food and moisture in their yolk-sacs.

It is well known that young Pheasants do not at first recognize or respond to the call of the foster-mother and that they will wander away and be lost if given full liberty like so many chickens when first cooped. It is usual to have a "run-out" fitted to the coop for the first few days. A much better plan is to drive half a dozen stakes into the ground, forming a 9 ft. circle around the coop: to these is tied a length of $\frac{1}{2}$ in. mesh wire netting about 2 feet high. The chicks are thus able to run round the coop and get their sense of orientation in

every direction before receiving their full liberty, whereas with the usual run-out they have no idea what the world is like at the back of the coop and may quite easily lose themselves if they have a sudden fright when first liberated. The chicks are of course shut in with the hen each evening and let out as early as possible in the morning when they get their first feed—then is also the time to count them in order to check any possible losses.

It would be imagined that the broods are quite safe when shut in at night, but this summer I lost two Elliot's out of four during the night, the culprit being a weasel which had found its way into the coop through a mole run which happened to run that way.

A dead Sparrow, well plastered with poison, was pushed down the run and as it had disappeared on the following day I can only presume that that weasel had gone where all bad weasels should go.

Sparrow Hawks, of course, are a danger and also the Kestrel, which so many people tell us feeds entirely on mice, moles, and beetles.

A Pheasant breeder of very great experience tells me that a Sparrow Hawk will come regularly morning and evening, taking a poult each time until the whole brood is exterminated, but that a Kestrel will return every forty to sixty minutes providing the chicks are small enough to be carried away, and I can personally vouch for the statement that this pretty little Hawk does take Pheasants quite readily.

Not everyone knows that any Hawk can be kept away quite easily providing the breeding ground is not too large. The procedure is much like that employed to keep Sparrows off lawn seed, but in this case one uses black thread instead of cotton, and this is stretched across the ground at intervals well above one's head ; if any Hawk touches one of these threads he will never return.

I am at the moment wiring in about an acre of grassland which will be cat, stoat, and rat proof, and I hope by means of these threads to make it also safe from anything which the heavens may send us, for I have no doubt that Owls, Rooks, and Crows would be equally well discouraged. I trust that the above notes will only be taken as advice to other beginners like myself, and I have little doubt that they will cause a supercilious smile in some of the many experienced breeders who are members of our Society. My excuse must be that I so well

remember how completely at sea I felt on many minor details when I first began trying to breed Pheasants just eighteen months ago.

Turning to Passerine birds I at once feel much more at home, having kept these constantly for upwards of thirty years.

I wonder how many present members of the Society can remember the Australian collectors Payne and Wallace, who used to import thousands of Gouldian, Long-tailed, Parson, and other Grass Finches as well as a goodly number of the rarer Painted Finch; I well remember my visit to Bath where these collections were housed in 1907.

The birds were kept in long and roomy box store cages—the perches ran from one end to the other of the cages and each succeeding perch was a little higher and farther back than its neighbour.

Each of these boxes contained literally hundreds of birds and I can remember my wonder at not seeing a single bird with its eyes closed—or its head under a wing.

First, the birds were cleaned out several times a day—the grit, which was ground quartz, was in feeders; the seed, mainly canary also in tins, was fixed to the front of the cage and any husks and spilt seeds went through the cage floor which was composed of wire netting for about 3 inches back from the bottom rail—it will be readily understood that the birds could thus not possibly eat waste or fouled seed and the collectors attributed their success to this arrangement.

Certain it is that these birds lived when taken away and that they did not require all the various chemicals and patent foods which are now given them.

To return to 1937 and my own birds:—

SIBERIAN BULLFINCHES reared two young which is rather unusual, but our member, Mrs. Charles Seymour, had the good fortune to double that number though it must be admitted that her hen had been in England for two years and was therefore quite settled down and at home.

BLUE GROSBEAKS (I think *Cyanocompsa cyanea*) for the second year made no attempt to nest. These are very lovely birds but rather wild. The cock has quite a nice, if somewhat monotonous, song.

CUBAN FINCHES only reared two young, whereupon the hen died. These little birds always interest visitors and appear to be ready breeders

but they most certainly will not tolerate any form of inquisitiveness in their domestic affairs.

WHITE-FRONTED or JOBI ISLAND DOVES were as prolific as usual and at the moment, well past the middle of November, at least three hens are incubating.

PEACEFUL DOVES should, in my opinion, all be sent to an asylum for birds—they refuse to make use of quite nice platforms and nests provided by me and appear to prefer a convex surface for their ridiculous nests. Their last act of insanity was to fill a large bowl containing their drinking water with building materials. This happened each day for about a week until finally I put the bowl on the ground, when they mercifully went elsewhere. Only one was reared.

DIAMOND DOVES have excelled themselves. Last year I had three pairs in one large aviary and although there was little if any fighting very few were reared. This season I put each pair in a separate aviary except that in one case I had two hens with one cock—both these hens had nests of fertile eggs. The total number reared was about sixteen and the last squab left the nest to-day (28th November) after three or four very hard frosts ; there are still two nests of eggs.

GREEN AVADAVATS were surprisingly satisfactory. I had two very antique males, real patriarchs, for whom I bought two hens on the occasion of the Society's garden party in July ; by the end of August one pair had brought off four young and the other pair fully reared five which flew in mid-September. They have all withstood the recent frosts but have now been caught up and caged.

My chief disappointment this year has been my failure with the GREATER NILTAVA (*Niltava grandis*), of which I have a beautiful pair. These birds made a half-hearted attempt to nest in 1936 when in Mrs. Wharton-Tigar's aviaries, with me they did not do much better. The partly built nest was placed in the fork of a weigelia and was composed of a few laurel leaves and coarse grasses. I should have expected the male of this Robin-like bird to feed the hen but I never saw any such sign of devotion. Both birds have a marked dislike for the open flight and spend most of their time in the shelter. They are adept at catching insects in the air and are quite one of my star-turns with meal-worms when I have visitors.

RED-HEADED PARROT FINCHES reared two broods, four young in each case.

BLUE-HEADED PARROT FINCHES (Goodfellow's sub-species) did nothing this year though my old pair attempted to breed and actually built and laid in their winter quarters, eggs clear. The young of 1936, a cock and two hens, only began to build some three weeks ago, whereupon I caught up and removed the male.

RUFICAUDAS rather annoyed me. One youngster was reared in May—whereupon the hen died, and all the "hens" I have since bought have been cocks, including one from a well-known member!

Another "pair" made up of a 1936 cock bred here and a bought "hen" are also two cocks.

My old ORANGE-HEADED GROUND THRUSHES laid and reared twice, though only one youngster was reared on each occasion, first a hen and then a cock.

They again chose their food pan as their nesting site. My failure to rear two full broods was due indirectly to the drought and the difficulty of finding small worms, which are a perfect and sufficient diet for the purpose. I was therefore obliged to use large "lob-worms" chopped up and I am quite certain that these are tough and indigestible.

Two pairs of Shammas were very disappointing: my best pair carried a few straws into a box but no egg was produced, the other pair laid early in May. As these birds are difficult to breed but are at the same time prolific egg-layers, I put the first clutch of them under a wild Robin. I did not visit the nest until I judged the young would be about a fortnight old, only to find three well-feathered chicks outside the nest with their heads bitten off. A keeper tells me this was the work of a Jay. For some reason no more eggs were laid.

Two JACKSON'S CORAL-BILLED THRUSHES both carried a few straws but did not build properly. I suspect both of being hens.

My WESTERN BLUE ROBINS never attempted to nest, although the cock was constantly entering one of the nest-boxes and calling to his mate.

Of the Eastern variety I have two pairs and here comes my final jeremiad.

Twenty-five young were hatched and only two reared and these both cocks.

These catastrophes all occurred with young under Red-breasts, and in no case were the deaths of the young due to neglect by their foster-parents, of this I am absolutely convinced.

I have before now stressed the high mortality among wild birds, and these losses of valuable young were every time due to some "accident" to one of the parents, almost always the hen Red-breast, I do not feel justified in encroaching too much on the Editor's space, but should like to relate just one experience proving my theory that it is the death of a parent which causes these disappointments. I have a friendly cock Robin near my aviaries: we are on speaking terms and he sits on my arm and takes food from my hand.

Last spring he began to require not one, but several meal-worms, with which he always flew away. By repeating my bounty I was able to trace him to his hen sitting on five eggs in a cupressus hedge. The nest was beautifully concealed and I could never have found it without my little guide.

In less than no time I had substituted five Bluebirds' eggs which hatched in about a week. I did not approach the nest for another fortnight, but knew all was well as all my meal-worms were carried to the nest.

At fourteen days there were five splendid Bluebirds and I could already distinguish the sexes, four cocks and one hen. I unfortunately decided to wait another two days—would that I had been less patient. On visiting the nest again I found four young, cold and stiff on the ground, and the fifth equally dead on the edge of the nest—five beautiful young birds worth their weight in gold, and not the slightest sign of any injury! I made sure that the hen had come to an untimely end and that the young had thrown themselves out of the nest because they were cold and wanted their mother. These experiences always depress me for many days, but as I was walking away who should turn up but my little cock Robin asking for food. A few meal-worms were quickly picked up and carried into the cupressus where I thought I could hear the little squeak which the hen gives when being fed by her mate. This of course completely mystified me and I began to suspect the Robins of cold-blooded desertion. It was only by repeating my largess of meal-worms that I was able to follow up the Robins'

movements, until finally, to my amazement, I saw that he was feeding two or three recently flown young Missel Thrushes—such is the urge to feed that he had taken on these monsters ! My other disappointments were all very similar, except that on one occasion I found six young apparently dead when only two days old ; these were put in a cool oven. Two revived and one of them was hand-reared by my servants to the age of twelve days, when he gave up the ghost—he was a poor specimen anyhow. The cause of his death was “ enteritis ”.

Who of us does not make resolutions for next year—mine are a fixed programme of death and destruction to rats, stoats, weasels, and forgive me, my dear Editor, all species of Owls, but more especially the “ little ’un ”.

EXPERIENCES AND INCIDENTS IN SOUTH AFRICA

By C. N. ABRAHAMS

Our good Secretary has asked me to say a few words about our birds and aviaries at “ Ma Demeure ”, Claremont, South Africa, for the Magazine. This I do with the greatest of pleasure and hope it will be of interest to fellow members. I say “ ours ”, because aviculture is not a “ one-man hobby ” in our home. My wife and son are just as interested as I am. My wife knows as much, in fact more than I do, about our little feathered friends. Trained and woman-like, she does all the doctoring and nursing and cares for these little things, with an instinct and gentleness which makes me feel quite envious—but helpless. I do the donkey work—play the stupid part.

Aviculture is one of my later hobbies. My chief hobby is viticulture. Growing grapes for experience and show. We never really decided to take up aviculture. It just seemed to grow on us in a simple kind of way.

It was my little son’s birthday, and we were at a loss to know what to give him. Being naturalistically inclined, we decided on three pairs of small wild birds, and an aviary. One pair Orange-breasted Waxbills, one pair Blue-breasted, and one pair Ruddy Waxbills was the start.

To these we kept adding and soon the small aviary became too small, so we had to build a bigger one.

Then the "bird-fever" gripped the family. And as the fever grew higher, so our collection grew larger and aviaries increased in number. To-day we have some 700 to 800 birds. Included in the collection are :—

Whydahs.—Giant Whydahs, Paradise Whydahs (two species), Shaft-tailed Whydahs, Red-collared Whydahs, Red-shouldered Whydah, Yellow-shouldered Whydahs, White-winged Whydahs, Pin-tailed Whydahs, Crimson-ringed Whydahs, etc.

Weavers.—Madagascar Weavers, Orange Weavers, Red-billed or Quelia Weavers, Komoro Weavers, Red-headed Weavers, Scaly Crowned Weavers, Masked Weavers, Rufus-backed Weavers, Half-masked Weavers, Grenadier Weavers, Golden Weavers, Frontal Grosbeak Weavers, Orange-backed Weavers, Magpie Mannikin, etc.

Finches.—Pin-tailed Nonpareil, Red Avadavat, Green Avadavat, Zebra Finch, White Zebra Finch, Yellow Rump Serin, Rhodesian, Cape, and East African Green Singing Finches, Grey Singing Finches, Ribbon Finches (cut-throat), Melba Finches (two species), Silverbills Indian and African, Indian Spice-bird, African Fire Finches, Java Sparrows (white and grey), Bengalese white, chocolate and fawn, Saffron and Pelzen Finches, Black-headed, Tricolour and White-headed Nuns, Alario Finches, King Alario Finches, Cape Canaries, Steel Finches, Combassou Finches, Saigon Finches, Chaffinches, Goldfinches, European and Chinese, Brown, and Green Linnets, Bull-finches, European and Russian, Bramble Finches, Red-polls, Black-headed Siskins, Totta Siskins, Red Hooded Siskins, Common Siskins, South American Red-crested Finches, Pileated Finches, Jacarini Finches, White-throated Finches, Cuban Finches, Olive Finches, Lavender Finches (three species), Gouldian Finches (black and red heads), Yellow Rump Finches, Masked Finches, Long-tailed Grass Finches (red and yellow beaks), Pectoral Finches, Diamond Sparrows, Chestnut-breasted Finches, Cherry Finches, Blood Finches, Star Finches, Ringed Finches, Double Bars, Painted Finches, Parson Finches, Red-headed Parrot Finches, Tricolour Parrot Finches, Goodfellows' Parrot Finches, Desert Sparrows, South and West African Quail Finches, etc.

Waxbills.—African Waxbills (*Estrilda*) from St. Helena, Senegal, East Africa, Mauritius, the Cape, and South America, and each species is different. Rhodesian Ruddy Waxbill, Blue-breasted Waxbill, Cordon Bleu, Redfaced Waxbill, Dufresne Waxbill, Jamieson Ruddy Waxbill, East African and Rhodesian forms. Peter's Spotted Waxbill, Hartlaub's Green Twin Spotted Waxbill, Rosy Twin Spotted Waxbill, Brown Twin Spotted Waxbill, Black-cheeked Waxbill, Orange-breasted Waxbill, Tanagerine Waxbill, Violet-eared Waxbill, Orange-cheeked Waxbill, Sydney Waxbill, etc.

Buntings.—Golden-breasted Bunting, Rock Bunting, Cape Bunting, Indigo Bunting, Rainbow Bunting, Nonpareil, Versicolour Bunting, Snow Bunting, Cirl Bunting, Yellow Hammer Bunting, etc.

Miscellaneous.—Levaillant's Barbets, African Grey Parrot, Indian Quail, Chinese Blue-fronted Quail, Pekin Robins, Schalow's Lories, Pink-crested Lory, Red Face Lovebirds, Malachite Sunbirds and Double-collared Sunbirds, Redcrested Cardinals, Pope Cardinal, Green Cardinals, Military Troupials, Crossbill, etc., also a collection of Brazilian Flycatchers and Robins and Cardinallileas de La Siera. The latter are dear little chaps and perfect little Cardinals in miniature. Dark grey back and wings, black tail, and black crest beautifully curved forward, white throat and face with black stripe above eye. Under parts light grey. Length about $4\frac{1}{2}$ inches.

The aviaries are not large and out of reach, but necessarily of a controllable size, averaging approximately 24 by 8 by 6 ft., with closed houses and open flights.

Though living in sunny South Africa, we have our advantages and disadvantages the same as everybody else. Residing in a spot on the Cape Peninsula, where we have four to five months almost continuous rain, with snow on the surrounding mountains, frost on the ground, and varying bitterly cold winds in winter, one has to provide warmth and dryness for the tropical and sub-tropical species.

Hence, aviary construction has to be carefully thought out. Then, what with mice, snakes, prowling cats, mosquitoes, the Argentine ant, and the fierce heat of summer to contend with, to say nothing about bird ailments, it keeps one quite busy thinking out how to control all these gentlemen, and keep the birds comfortable and happy. The

aviaries are built of wood, felt, and concrete. The concrete foundations are 18 inches deep right around below ground and the houses and flights are firmly fixed to them, so as to withstand the terrific storms of winter. These deep foundations also serve to stop mice and snakes from burrowing their way through to contaminate seed and poach eggs.

The houses are constructed of wood, covered with felt. A $\frac{1}{4}$ in. square mesh wire, 18 inches high, is fastened between wood and felt, right around all houses, starting from foundation up. This prevents mice from gnawing their way through the wood. All windows fitted are of the dual type. The inner ones are covered with mosquito gauze and the outer ones are made of glass.

Two rows of controllable ventilation holes are provided near the roofs and also covered with mosquito gauze. Thus the houses are absolutely vermin proof, except for the Argentine ant, and draught-proof, at the same time affording plenty of ventilation.

A false roof is fitted over the roofs of the houses, thus causing a continuous current of air to flow between them. Throughout the year all birds are put to bed every night and safely locked up in their houses.

In winter, with the glass windows closed, we are able to heat up the house. Then, with the advantage of controllable ventilators, we are able to maintain a steady temperature, at the same time eliminating the damp air of our wet winter so injurious to Violet Ears, Diamond Sparrows, and other such delicate species, which cannot stand dampness.

On summer evenings, with the glass windows wide open and the gauze ones closed, the birds are safely protected against cunning cats and nagging mosquitoes, at the same time admitting an abundance of fresh air.

The false roof serves to modify the intense heat of summer days, as well as nights (summer nights are sometimes quite hot) and keeps the houses beautifully cool.

I think the Argentine ant is easily our most troublesome pest and the most difficult to control. We have tried every known brand of poison without success. They are spread throughout the Peninsula, but I think they prefer Claremont to any other suburb.

Most troublesome in summer they (the Japanese army) are always travelling for the soft food mixtures, termites, fruit, and young birds.

Many a valuable nest of young we have lost, due to these little gentlemen. They will kill and almost completely devour a nest of four young in one night. Before dusk my wife and I would search an aviary carefully, looking for the last scout and destroy every trace of them. Then we would put out tempting poisonous food in the hope that it would be nice enough and sufficient to keep them busy for the night.

But, alas ! we'd awaken next morning only to find that there had been sufficient for all and some to spare. And the Japanese army had pushed on and were busily marching to and fro, in a thick black stream towards a nest. On examination one would find they had reached—Japanese heaven, I sometimes think—and the nest is a thick black mass of ants and the young birds all dead.

They are tiny black gentlemen, so small that they can creep through mosquito netting, and that's why we call them Japanese. We have gone to considerable trouble in trying to cope with this pest.

This breeding season we have introduced a new system of nesting area. In some houses we have planted large branches of trees, to which suitable nesting bushes, boxes, baskets, and coco-nut husks and tins are fastened. In others we have suspended a nesting surface, also consisting of bushes, boxes, tins, etc., from the roofs of the houses, by wires, the idea being to bring the points of control down to a minimum. These points are covered with some sticky substance, i.e. tanglefoot, over which the ants will not pass, only here again we have to protect the birds from being caught on it. And so the game goes. So much for the Japs. I think we'll beat them before the end.

But there is the other side of the story. And all the trials, and all the troubles, cannot offset the great pleasure we find in our birds, with their interesting ways and habits and breeding results. Although the latter has been nothing really wonderful, so far as rare species goes, we have had a great deal of pleasure out of it. And after all, what more interesting and pretty can one wish to see than five common young Zebra Finches, with the backs of their little heads firm on the ground, forming a semi-circle, with mouths wide open, earnestly begging for food ; while Ma and Pa hop from one to the other, placing a blob in each little mouth, to a deafening chorus of keen little voices and quivering tails.

Towards the end of last year we were successful in breeding a cross between a Pin-tailed Nonpareil and Indian Spice Bird. This bird I sent to my friend, Mr. R. Cleugh, in Johannesburg, where it caused much comment. I believe it was exhibited in Johannesburg and Durban with distinction and acclaimed the only such bird bred in this country. In shape it is exactly like a Pin-tailed Nonpareil, including the pin-tail, but it has the sombre brown colours of the Spice Bird, except for a pink rump and no scales on the breast. I have not tried to claim the Society's medal, as I understand it only applies to members in England. Other breeding successes include African Fire Finches, Tangarine Waxbills, Zebra Finches, Tricolour Parrot Finches, African and Indian Silverbills, White Zebra Finches, ordinary, Long-tailed Grass Finches, Cuban Finches, Rufus-backed Weavers, Indian Spice Birds, Strawberry Finches, Bengalese Finches (three colours), Blue-breasted Waxbills, and Redfaced Waxbills.

Melbas have nested and brought young up to the feathered stage. Then, suddenly, they mysteriously disappeared. Others that have behaved in like manner are : Peter's Spotted Waxbills, Blue-breasted Waxbills, and Cordon Bleus.

At time of writing three young Tri-coloured Parrot Finches, young Long-tailed Grass Finches, and three young Cuban Finches have taken to the perches.

All seed is supplied by means of automatic feeders of the double-sided hopper type. These are refilled once weekly.

Water is laid on and supplied by means of a spray, shooting the water into the air, which falls back into a rock fountain.

It is a great treat to see the birds, in their many gorgeous colours, bathing under the spray in the sun of a hot summer's day.

Unusual Incidents.—In a place called Robertson, a friend has a Galah Parrot at large. He has the whole of Robertson to himself. His home is a huge oak tree in the back yard. Here he sleeps at night and spends most of the day. Everybody in Robertson knows him. Periodically he disappears for a week or so and returns when his holiday is o'er, perhaps staying at home six months before going for another. He has no wife or other (feathered) friends, but apparently no enemies. He has lived in Robertson some years.

One day, travelling down Queen Victoria Street, Cape Town, I noticed something unusual about the behaviour of a bird. I stopped my car and watched.

It was a Mossie (Cape Sparrow, *Passer melanura*), fighting with his own reflection in the glittering hub-cap on the spare wheel of a motor car. For six minutes I watched this pugnacious little chap battling away. Diving at his own reflection, dashing himself against the cap with amazing force, and slipping off on to the ground. But he would be up and at it again, until at last he could go no more and fell to the ground utterly exhausted, where he lay, until I disturbed him.

In Cape Town Docks, in breeding season, Starlings (*Sturnus vulgaris*), are very daring. The wharves and quays are kept clean and nesting material and trees are very scarce. But evidently as with man, so with the birds. "Needs must when the D'vil drives."

I watched a tramp steamer dock one day and be fastened to the quay. Immediately two Starlings settled in the rigging.

The ship's hatches were opened up and the first cargo to be lifted out was a crate packed with straw. In a flash the eager Starlings alighted on the fo'c'sle deck and each ascended with a straw in the mouth. There were no trees, so they took to a revolving crane. For a few minutes I watched these daring birds, in their earnest endeavour to complete their home—lest to-morrow the ship may be gone. The nest was built between the steel girders and corrugated iron of the roof. At times the birds would rest on near-by angle irons, apparently nonplussed, with straw in the mouth, when the crane had turned the opposite way round. But a moment's pause and they never missed the mark. Many nests of young have been found on these ever-revolving cranes. But the drivers are all very kind.

In a clump of trees, in a place called Rondebosch, the Egrets have roosted for many years. On my way to business every morning, at this time of the year, I always look forward to seeing them there. They roost in the topmost branches of these tall pine trees. And in the early morning, as the sun is warming them up, they spread their wings, and it is always a beautiful sight to see these big trees, with a perfect cap of pure white instead of dark green.

This year they have decided to breed there, and I have never seen

so many in mass or seen such a busy scene. The place is simply teeming with birds and alive with wings and voices.

The trees are bounded by three busy roads and motor cars are continuously passing, but the movement by day and the glaring headlights by night have not driven our friends away. It is almost pretty, though very strange, for the first time to hear the low mimicking noise, when passing through, under the trees, late at night. So prolifically are they breeding that many fully fledged young have been found next morning, lying dead on the ground beneath the tall trees, having fallen from their high nests.

One actually insisted on answering roll-call one morning, in the fifth standard classroom, of the near-by Boys Hill School. This was my little son's experience.

THE CRYSTAL PALACE SHOW

By N. WHARTON-TIGAR

For the second time this Show was held in the Dorland Hall, Piccadilly, owing to the destruction by fire of the old Crystal Palace, more than a year ago. Unfortunately, Dorland Hall is by no means ideal for the purpose, although this year's Show was a great improvement on last year's. Even so, the Foreign Birds and Pheasants were housed in a comparatively cramped corner, causing at times great congestion and intense heat; also, the birds were not too well distributed, classes in some cases were partly on one side of the Hall and the remainder some distance away, making it difficult to examine and compare the birds. However, apart from these disadvantages, it was a most enjoyable function; the quality of the exhibits was very good indeed. Many rare and beautiful birds and Pheasants were shown, and staged in grand condition.

Owing to his unavoidable absence, Mr. F. E. Fooks took Mr. J. Delacour's place in judging Pheasants and soft-billed foreign birds. Mr. Fooks began with the Pheasants, and in Class 327 gave 1st to Mrs. Barrington's outstanding Amherst. Mr. Lambert was

2nd with a lovely Golden, which won him Mr. Spedan Lewis' beautiful cup for the best Golden at the Show. Mr. Lambert also was 3rd in this class, and again 1st and 2nd in Class 328 with an Edwards and Swinhoe's Pheasant. And in Class 329 with 17 exhibits Mr. Lambert came 1st and won two specials, with a lovely Peacock Pheasant from Burma. Mrs. Barrington was 2nd with a fine Impeyan or Monal, and Lord Tredegar 3rd with another beauty of the same species. When one realizes the difficulty of transporting these birds, the display made by this collection of over fifty specimens was very wonderful.

Now we come to the classes for Parrot-like birds, judged by Dr. Derscheid, Belgium. Class 330 for Lovebirds, etc., 1st was awarded to Mr. W. Ribble's lovely Red-faced Lovebirds, and 2nd to the same species shown by Mrs. Willsher ; 3rd to Mrs. Varney's fine pair of Peach-faced. Class 331 only two exhibits : 1st went to an outstanding Red-rumped Parrakeet shown by Mrs. Cotton, and 2nd to Mr. Handley, with a pair of the same species. In Class 332 for Cockatiels, 1st went to a very dainty pair shown by Mrs. Hamilton, who also won 3rd ; 2nd Mr. W. A. Tee. In Class 333 Lord Tredegar came first with an exceedingly fine Bauer's Parrakeet, a tame and amusing bird ; 2nd to Miss N. Blay with a Rosella ; 3rd to Mr. Norman Allison with a lovely Crimson-wing. Class 334 also a very small one, all three exhibits were shown by Mr. Handley, who got 1st, 2nd, and 3rd with a Many-coloured, Turquoisines and Bourkes. The next class, 335, was small, but the three exhibits were wonderful. Mr. Ezra 1st with a superb pair of Queen Alexandra's Parrakeets, most perfectly staged ; 2nd Mr. Maxwell with a very fine pair of Derbyans, and Miss Henderson with a pair of Queen of Bavaria Conures. When I first saw this very rare exhibit I thought there must be some mistake, surely nothing could beat it ; however, on looking at the winners, one realized that they won on condition and the way they were put down. In Class 336 Mrs. Proudfoot won with a lovely little Meyers Parrot. Lord Tredegar showed a very attractive Yellow-fronted Amazon, and Mr. Batt a very fine African Grey. In Class 337 Mr. Maxwell was 1st with a grand pair of Banksian Cockatoos ; Mr. Batt's rare Citron-crested was 2nd, and his Salmon-crested Moluccan Cockatoo came 3rd ; a very fine fellow, and tame too. In Class 338 Miss Henderson showed the

rare and very charming Short-tailed Parrot, and Mr. Warburton a very fine Hawk-headed Parrot.

Mr. Ashby's classes for Seed-eaters began with Class 339 for all species of Doves and Pigeons, and Mr. Ezra was 1st with a very fine pair of Papuan Golden-heart Pigeons. Miss Eileen Fowler was 2nd and 3rd with Zebra Doves and Peaceful Doves. In Class 340 Mr. Cecil Bernstein was 1st with a grand pair of Roul-Roul Partridges; the hen distinguished herself by laying an egg during the Show, and both looked very much at home—a very attractive exhibit; 2nd Mrs. Barrett's Californian Quail.

Now follow what are known as the common little foreign birds. Class 341 for Zebra Finches had 15 exhibits. Mr. F. Johnston was 1st with a fine pair closely followed by Mrs. Hildrick-Smith, who got 2nd, and Mr. Crozier, who got 3rd, and Mrs. Anderson-Morshead showed a pair of the more uncommon white variety, and they looked most attractive with their bright orange beaks. In Class 342 Mr. Shivers was 1st with Green Singing Finches; Mrs. Varney 2nd with a neat little pair of Silverbills, and Mr. Green 3rd with a pair of the large St. Helena Waxbills. In Class 343, Mr. Click won with a perfect pair of Cordon Bleus, Mrs. Gowland 2nd with a pair of Blue-breasted and Mr. Marker 3rd with a lovely pair of Lavenders. In Class 344 Major Lamb came 1st with Rufous-back Mannikins; Mrs. Gowland 2nd with Magpie Mannikins; and 3rd was awarded to Mrs. Willsher, with a pair of Fawn and White Bengalese. In Class 345 Major Lamb got 1st with a really grand pair of Cherry Finches, which were claimed, I understood, at catalogue price, £10; 2nd Mr. Redvill's Heck's Grass-finches; 3rd Mr. Gates' Diamond Sparrows. In Class 346 for Gouldians, the Rev. J. R. Lowe won with an outstanding pair of Redheads; 2nd Mr. Gates, also with a pair of Redheads; and 3rd Mrs. M. C. Frayne's grand pair of home-bred Blackheads. In Class 347, Mrs. Codner won 1st and 2nd with Red-faced and Melba Finches in finest condition; 3rd Mr. Williams with a rather doubtful pair of Pin-tailed Nonpareils. In Class 348, Mr. Underwood was 1st with a pair of Schlegel's Green-spotted Waxbills, a pair to fill one with envy! Mrs. Gowland 2nd with Grenadier Waxbills, also called by the exhibitors Purple Violet-eared, and Royal Violet-eared; the difference is said

to be in the colour of the wing, which is black instead of brown, as in the Grenadier ; only a visit to the Natural History Museum can settle this point ; 3rd to Mr. Salter with a pair of Violet-eared Waxbills. In Class 349, 1st was awarded to Miss M. Stewart for two fine Rainbow Buntings, unfortunately this was a mistake as they were both cocks ; 2nd to Mrs. Herring with a fine pair of Golden-breasted Buntings ; 3rd to Mr. Oversby with a pair of Nonpareil Buntings. Class 350 for the Common Cardinals, 1st and 3rd to Dr. Wilson with Green and Red-crested, and 2nd to Mr. Best with Virginian Cardinals. Class 351 for the rarer Cardinals and Grosbeaks, etc., the 1st was won by the Hon. Mrs. Jervis with a splendid pair of the rare Mexican Yellow Grosbeak ; 2nd to Mrs. Gowland with a lovely pair of Black-cheeked Cardinals 3rd to Mrs. Proudfoot with a pair of Japanese Hawfinches. In this class also was shown a pair of the rare Phoenix Cardinal, from Venezuela ; and a very handsome Chinese Hawfinch. Class 352 had only three exhibits ; 1st was won by Mr. Huyton with a pair of Crimson-crown and Weavers ; 2nd Mr. Haynes with a Rufous-necked Weaver, and 3rd Mr. Best with another Crimson-crowned Weaver.

Mr. Fooks, judging the foreign soft-bills, awarded 1st in Class 353 to Mr. Tremlett for a very fine pair of Scarlet Tanagers ; 2nd to Mr. Maxwell with a wonderful striated Tanager, and 3rd to the same exhibitor's Superb Tanager. In Class 354, 1st went to Mr. Ezra's perfectly glorious pair of Paradise Tanagers ; 2nd to Mr. Norris with again a marvellous pair of the Orange-breasted Tanager ; and 3rd to Mr. Maxwell with the pair of little Hooded Tanagers, a very meritorious exhibit. I happen to know these difficult little birds were brought over from east Brazil in November, 1933, and Mr. Maxwell has had them ever since. Now we come to an outstanding quartet in Class 355, each bird was a gem of the first water : 1st was awarded to a Garnet-throated Humming Bird, in finest condition, shown by Mr. Ezra, who is superlative in the art of keeping Hummers in cages ; 2nd to Mr. Maxwell with his marvellous Superb Sunbird. Superb indeed, and in captivity for four years ; 3rd and 4th also to Mr. Maxwell with the well-known and much shown Senegal Sunbird, moulted out by him into wonderful colour once again, and singing too ; last but not only least because the others were so wonderful, came the Buff-throated Sunbird, a tiny gem

and one of the loveliest of Mr. C. S. Webb's finds last year, on the Gold Coast. What a class, and what a task for Mr. Fooks ! Class 346 for Robins, 1st went to Mr. Ezra's grand pair of the Western Blue Birds, never seen in this country, at any rate for many years ; 2nd to Mr. Frostick with a very fine cock of the Common Bluebird, by no means common really ; 3rd to Mr. H. B. Smith's Pekin Robins, and 4th Mrs. Gowland's Yayeyama Robin, closely related to the Loo Choo variety, unfortunately not in perfect feather ; a very rare bird. Class 357 for Shamas and Clarinos was a very interesting one ; 1st went to Mrs. Anderson-Morshead with a Townsend's Solitaire, singing divinely ; 2nd Mr. Maxwell's Long-tailed Shama from Penang, a beautiful exhibit ; 3rd to Mr. Saunders with another good Shama, and 4th came Mr. Maxwell's rare and beautiful Strickland's White-capped Shama. In Class 358 Mrs. Anderson-Morshead was 1st with a splendid pair of Rüppells Starlings ; Lord Tredegar 2nd with an outstanding Long-tailed Glossy ; 3rd Mr. Herring with a Superb Spreeo. Class 359, 1st Mr. S. A. Haynes with a rare Laughing Jay Thrust ; 2nd to Mr. Ezra's Dwarf Hermit Thrushes ; 3rd to Mrs. Gowland with a Cuban Thrush. Class 360 for Hangnests, etc., was a nice class ; all were good. 1st to Mr. Norman Allison's very beautiful Golden-capped Troupial ; 2nd Mrs. Temlett's Brazilian Hangnest in grand form and colour ; 3rd to Mr. Norris with his fine pair of Brazilian Hangnests, not so good in colour ; also in this class there was a good and steady Bullock's, and a Baltimore Hangnest. Class 361, Mr. Ezra's pair of Formosan Blue Pies in grandest form and perfectly lovely ; 2nd Mrs. Proudfoot's Brazilian Motmot ; 3rd Mr. Bernstein's Hellas Jay. The Hon. Mrs. Francis Curzon showed two pairs of Barbets, Le Vaillants and Pied Barbets. Class 362 for the Bird of Paradise, etc., was very disappointing with one exhibit only, Mr. Johnson's Cock of the Rock, a fine bird, but at present patchy in colour. Class 363, Lord Tredegar with a very fine Laughing Kingfisher, a great attraction to visitors ; 2nd Mr. Ezra's White-crested Touraco in highest condition ; 3rd, Mr. Ezra's Toco Toucan. Class 364, 1st Mrs. Trayne's Korean Redstart, a most lovely little bird, well put down ; 2nd Mrs. Gowland's Plumbeous Redstart, which I did not see ; 3rd Mrs. Shearing's Cardinal Honey-eater in fine form after several years in captivity, a great credit to

its owner. In this class was also the rare Long-tailed Manakin. Class 363, 1st to Mr. Eaves' Golden-backed Woodpecker; 2nd to Mr. Maxwell with a rare Necklace Pitta; 3rd Mrs. Gowland with a Robin Chat, and 4th Mr. Norris with a wonderful pair of lovely Blue-winged Pittas, most attractively staged. Also in this class were two Brown-backed Australian Kingfishers, and Mr. Ezra's well-known and very rare Short-tailed Ant Thrush in the usual tip-top condition. Class 366 for Hybrids and abnormal birds: 1st Mr. Warburton's highly coloured very Festive Parrot; 2nd Mr. Ezra's Baraband Parrakeet; 3rd Mr. Handley's Fisher's Lovebird.

Mr. Seth-Smith very kindly walked round, looking at the exhibits with me, giving me the benefit of his great knowledge and experience. We also went and had a look at some of the British birds, and they were a very fine lot. We particularly noticed a fine Redwing, both Grey and Yellow Wagtails, some very fine Choughs, a Stonechat, a Whinchat, and a Common Wren, looking very fit. A fine pair of Redstarts, a Treecreeper, in grand condition, also a Nuthatch; some wonderful Waxwings. Both Greater and Lesser Spotted Woodpeckers, a Blackcap, and a Nightingale. Two very fine Albino Song Thrushes, a Lutino Corn Bunting, a White Starling, a Lutino Yellow Bunting, and a Lutino Greenfinch.

I hear that the Show cannot be held again in Dorland Hall; let us hope the management will find another hall with all its advantages but with more space given to Foreign Birds, Pheasants, and Parrot-like birds, and also some seating accommodation.

ANOTHER ATTEMPT AT BREEDING AGAPORNIS PULLARIA

By HELMUT HAMPE

In the AVICULTURAL MAGAZINE of last year (p. 148) I described my unsuccessful attempt at breeding *A. pullaria*. The female of this pair unfortunately died of heart complaint, and I had to give her husband, who knew all about the nesting hole, a new mate. Luckily they took to each other at once, and when they were allowed into the flight on the 24th March, 1937, by noon on the same day the male was examining the hole made by his late wife, and at five minutes past one I saw the

female vanish into the hole. It was interesting to note that as her desire to breed increased the female started persecuting the pair of Plum-headed Parakeets inhabiting the same aviary. The Plum-heads had just reared a brood, and while so doing had persecuted a pair of Orange-cheeks, though out of the breeding season they got on quite well, and paid each other little or no attention.

By June the female was often quite a long time in the hole, and as in the previous year the male sat swaying near it, but only entered occasionally and for a short time. The female did not do much to the hole, generally she only smoothed the passage entrance. Like the former female, she only carried in very small pieces of bitten willow leaves in her feathers, the quantity which I found later in the hole was very small indeed, even when she had begun to sit she often carried in more leaves, but the male never did this. I saw them pair for the first time on the 6th July, afterwards repeated many times. As a rule it lasted four to five minutes.

From the 29th July onwards the female slept in the hole, and on the 1st August, or possibly late on the 31st July, she laid her first egg. Four more were laid on the 2nd, 4th, 6th, and 8th respectively. They measured 23.5×16.5 , 22.5×16 , 20×16.5 , and 19×17.5 mm. The first egg was unnaturally pointed.

Incubation began with the first egg, but only the female sat. Her mate fed her once daily in the hole, but always spent the night in the shelter. When the female left the nest to relieve herself, he stood by the hole enticing her back to it, and always accompanied her when she flew back again.

Unfortunately the eggs did not hatch; some contained dead chicks, and the rest were infertile, so I took them away on the 1st September, and replaced the old male by a younger one, with whom the female luckily soon became friendly, sitting side by side and billing each other on the 9th September. After this the female occasionally revisited the hole, but without result.

I intend to put them back in the old aviary after they have passed the winter in an unheated bird room, and have obtained a second pair which will be placed in another aviary and provided with a large heap of chalk, and I hope that in 1938 I shall at last succeed in breeding this species.

FURTHER EXTRACTS FROM THE ANNUAL REPORT OF THE AVICULTURAL SOCIETY OF NEW ZEALAND

A FEW INTERESTING TIPS IN FEEDING BIRDS

By Dr. RANSTON and the HON. SECRETARY

The feeding of "blighties" or Zosterops.—In England they treat them as Sunbirds, giving them quantities of Sunbird nectar, of course liquid. Better results will be obtained by feeding them a soft-billed mixture such as is used for Pekin Nightingales, together with apple and other fruit such as pears, and, to a minor extent, bananas. On this diet, they will retain perfect plumage and live in an aviary for many years. Several birds have been kept on this diet by Dr. Ranston for five years.

Bengalese.—These little birds appreciate a diet containing plenty of paddy rice and, on this seed, develop and grow considerably larger than the usual small imported bird.

Pekin Nightingales and Zosterops are partial to the skin of hulled oats when other seed-eating birds have already eaten the kernel.

Honey-eating birds.—A tip picked up in Australia. The usual nectar given is fed as a solution of far too great strength. As an alternative diet, offer a teaspoonful of good honey to half a teacupful of warm water with, added to it, as much genuine raw sugar as will cover a sixpenny piece. The usual No. 3 brown sugar is not satisfactory, being refined to a certain extent. It is necessary to obtain the genuine raw sugar as it comes into the refinery. This sugar is now sold by many shops. It adds to the weak solution of honey and water food substances missing in the honey. The mixture as fed to the birds should taste only slightly sweet to humans.

BREEDING OF WHITE-WINGED WHYDAHs

On 14th November I noticed the male Whydah carrying straws about—so on watching I saw him building a nest. He fastened it very securely to the branches of a currant bush in a very exposed position.

It was a beautifully woven nest, but with no lining. Eggs were laid on 16th, 17th, and 18th November—three eggs. The hen started to sit on the 17th, and the first baby hatched on 1st December. By 2nd December there were two babies. The third egg, bluish green very mottled with brown spots, disappeared. The hen appeared to do all the feeding and I never saw the father take anything to the nest. The food consisted of seeded grass, of which there was plenty growing in the aviary, growing canary seed, soaked seeds, soaked millet sprays, eggs and Madeira cake, Shama food, and gentles. There were meal-worms, but the birds did not touch them, although the mother seemed to be always looking round the trees for insects. The weather was really wintry and I had to protect the nest from rain by putting a large piece of glass on the roof.

The birds continued to grow and the mother ceased to sit on them at night on the twelfth night. The first baby left the nest on 17th December, not too well-feathered, and the other left the nest on 19th December. The weather was so very cold that one night I was very worried about them, so after dark I brought them inside, putting them back in the morning at 4 a.m. They continued to grow and were fully independent of their parents on 5th January. I took them away and put them in another aviary. I shall have to wait until they colour up before I can tell what sex they are.

MRS. A. EWENS.

ORNAMENTAL PHEASANT SOCIETY NOTES

During the year 1937, the O.P.S. made steady progress, and if one source of advancement was more noticeable than any other, then it was the fact that our Society is now making a world-wide appeal. Of members who joined the O.P.S. during 1937, no less than 35 per cent live in countries other than Great Britain. We consider this feature most satisfactory, we always intended that our activities should be of world-wide significance, and our appeal for support has been broadcast to all countries. At our annual general meeting, which will take place before these notes appear, our members will consider

this matter from every angle. We anticipate having at least 100 members in France and Belgium before many months have passed, and we must now consider the best method of keeping in close touch with these welcome members, as well as with those in other countries. There is a difficulty which will at once be obvious, we have not a common language. Mr. F. Fooks has kindly consented to act as Secretary for the French-speaking members, and by some method yet to be discussed and determined, he will communicate our activities and suggestions to the members concerned. The interest that is taken by our members abroad is amazing, it far exceeds that demonstrated by our British members, and the lethargy of the latter is at times most exasperating. I suppose, however, we should not complain, for our steadily growing membership is most encouraging. At the forthcoming meeting a new committee will be appointed, and although it is to be hoped that some of the old leaven will be re-elected, we also hope that some of the new members will prove most energetic. We admit that we desire closer co-operation between the North and South of England, and ideas will be thought out which we hope will ensure this desideratum. We also hope that at least three of our French-speaking members will be elected on our Committee. Fortunately our President, M. Delacour, is able to keep us in touch with matters on the Continent, but it is conceivable that if some of our ordinary members are elected to serve on the committee, even greater interest will be the result.

JEROME LAMBERT.

CORRESPONDENCE

MADAM,—I am pleased to see the article "The Tyranny of the Trade". I call it "The Tyranny of the Fancy Press". I have found that the editor of *Cage Birds* will not publish any letters or articles in his paper that might upset traders who advertise, or journalists, and his pet experts.

Some time ago I sent a letter to *Cage Birds* asking a trader in nest boxes, who had been writing on Mendel's Theory, to explain why Cinnamon Wings did not breed according to his theory. The editor would not publish my letter.

I may say I have always found the editor of *Bird Fancy* willing to give fair play to all.

JOHN W. MARSDEN.

COLOUR FEEDING OF NONPAREIL BUNTINGS

MADAM,—Like many aviculturists who keep such birds as Nonpareil Buntings I have found that in spite of keeping them in good outdoor aviaries they have lost the beautiful red colouring of the breast after the first moult. The somewhat dingy yellow tone which replaces the brilliant red or rather scarlet is always a great disappointment, and detracts considerably from the beauty of the birds.

This year I determined to try an experiment after having first of all discussed the problem with a friend with a wide knowledge of vitamins. His advice was to provide Vitamin A. I immediately procured some and adopted the following procedure. I mixed two or three drops in about a tablespoonful of cod-liver oil and thoroughly mixed the oil in the seed mixture which is the only food supplied to the birds.

I gave this mixture of oiled seed for about a month before moulting and a month after, with the gratifying result of restoring the red colour to the Nonpareils.

I think this procedure might well be adopted with other species which lose colour in captivity. I should be interested to know if any member of the Society has tried treating birds in ill health with homœopathic medicines, particularly in cases where the digestion is out of order or where there is definite inflammation.

J. ALASTAIR ANDERSON.

ADDITIONAL BREEDING RECORDS OF BIRDS AT LIBERTY IN
TAHITI

MADAM,—Since my letter a pair of Mrs. Wilson's Tanager (*Tanagra lavata centralis berlepsch*) have brought a fully-fledged young one to the feed dish, he is now feeding himself. I did not know they were nesting and they appear to be nesting again. Also about a week ago I found a Maroon Tanager's nest (*Ramphocælus carbo*) with young in it, I should judge they are about two weeks old. So please add their names to the list of birds that have nested and reared young here, which was published last month. I am especially pleased about the Mrs. Wilson's Tanagers, they are such beautiful birds. I have ordered several dozen more of each species for liberation. This is the beginning of the breeding season here and great activities are going on. I look forward to great success as the liberated birds seem to be well acclimatized.

EASTHAM GUILD.

REVIEW

THE SKY'S THEIR HIGHWAY. By KENNETH WILLIAMSON. Published by Putnam and Co., Ltd., 42 Great Russell Street, W.C. 1. 10s. 6d. net.

Only a genuine lover of creatures wild and domesticated could have written this book. Mr. Williamson is young, and his field for observation is restricted, but he has made the very most of his opportunities, and enters into the lives around him by means of sympathetic observation without interference even when a Hawk chases a House Martin, or Starlings drive Spotted Woodpeckers from the holes they have laboriously chiselled, a height of detachment to which few naturalists could attain. He is a north country man, and draws most of his inspiration for his books in rambles about the dales and woods, noting down all his observations in his diary, so that his descriptions and notes are all first hand, with perhaps the exception of the wanderings of the ill-fated Snowy Owl, though this is but too probable. The author does not deal with any but well-known birds, but our interest is captured and maintained even when he talks to us of Tawny Owls, Ox-eye Tits, Kestrels, and Chaffinches. His method does not entail capturing or harrying the little lives around him; it is the result of patient quiet watching and non-interference; only once is he the god from the machine when he picks up an injured Owlet and nurses it back to health. Otherwise he is contented to listen and observe, allowing his subjects to live their lives as seems good to them.

It must not be supposed, however, that he has merely written a series of disjointed notes; the chapters on Swallows show systematic and definite study, as does also the chapter on bird songs. Mr. Williamson is to be congratulated on having produced an interesting and eminently readable book. The woodcuts with which it is illustrated add greatly to the beauty of the book.

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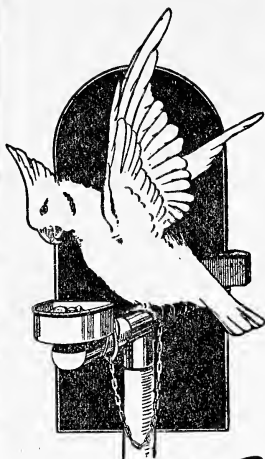
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- C. BERNSTEIN, 19 Copgrove Road, Harehills, Leeds, 8. Proposed by John Frostick.
- Mrs. E. W. BERRIDGE, Bydews Place, East Farleigh, Maidstone. Proposed by A. F. Moody.
- OLIVER EDWARD CLEMENTS, L.D.S., R.C.S.(Eng.), 15 Mercers Road, London, N. 19. Proposed by D. Seth-Smith.
- Mrs. C. H. GOWLAND, Tadorna, Pensby Road, Barnston, Wirral, Cheshire. Proposed by John Frostick.
- Sir JOHN LUMSDEN, Earlscliff, Baily, co. Dublin, I.F.S. Proposed by William R. Partridge.
- “ORNAMENTAL PHEASANT SOCIETY.” Proposed by E. Maud Knobel.
- Miss LOUISE PYE, High Street, Haslington, Crewe. Proposed by W. L. English, M.B., F.Z.S.
- JOHN CHARLES ROYLE, 69 Watts Street, Levershulme, Manchester, 19. Proposed by Walter John Humphries.
- Miss JEAN THIN, Aston Somerville Hall, Broadway, Wores. Proposed by W. R. Partridge.

NEW MEMBERS.

- C. H. BRENNAN, Old Castle House, Canterbury.
- Dr. DONALD HUNTER, 132 Harley Street, London, W. 1.
- C. BUCKINGHAM JONES, Dibrugarh P.O., Assam, India.
- CLIFFORD WESTON, Hall Leys, Oadby, nr. Leicester.

RE-JOINED.

- HAROLD T. KING, 7 Weardale Road, Nottingham.

CHANGES OF ADDRESS.

- Rev. R. B. ABELL, to 28 Church Road, Teddington.
- T. BARNARD, to Furzebrook House, Wareham, Dorset.
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THE AVICULTURAL MAGAZINE



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THE AVICULTURAL SOCIETY

FOUNDED 1894

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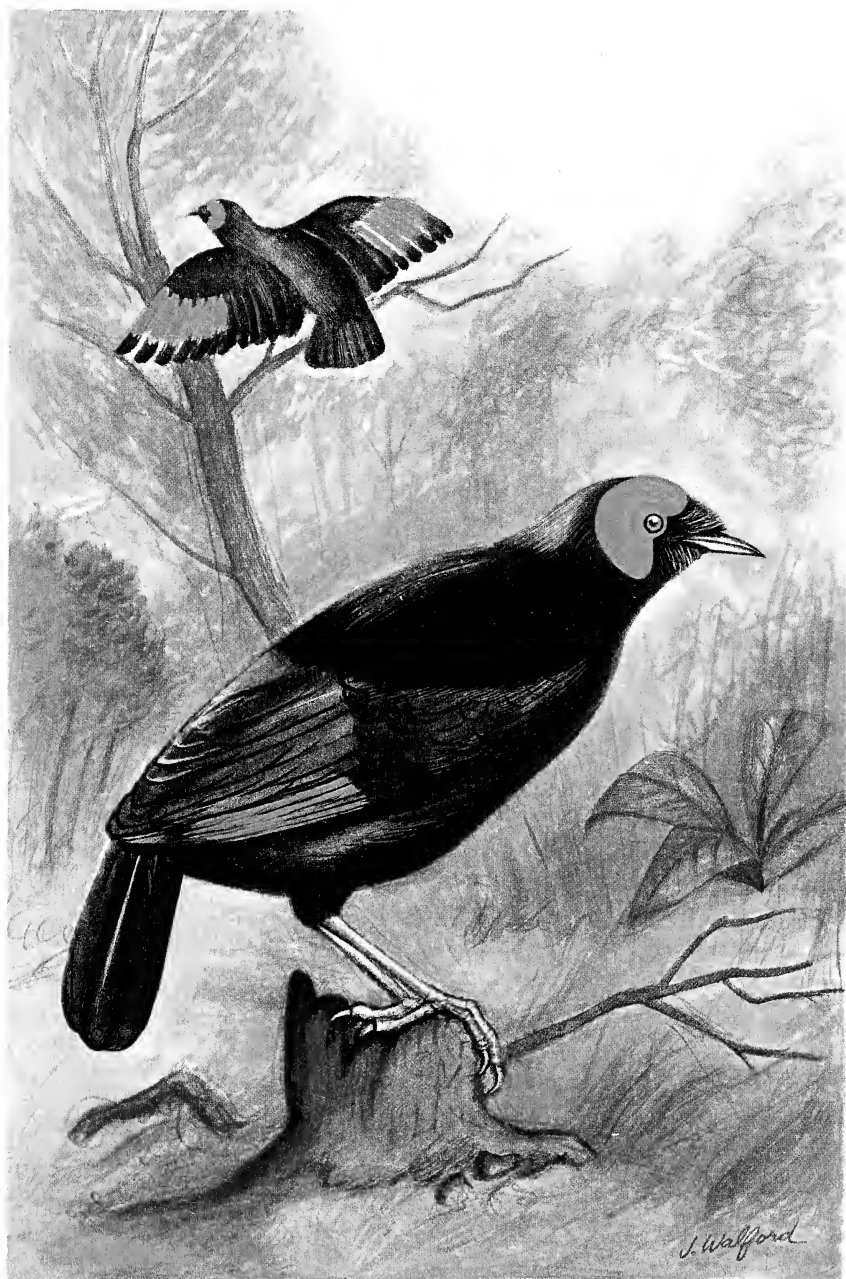
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THE AVICULTURAL MAGAZINE

THE JOURNAL OF THE
AVICULTURAL SOCIETY

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MARCH, 1938.

THE ORANGE-WATTLED BIRD OF PARADISE

(*Macgregoria pulchra*)

By JAMES FISHER

This interesting bird was first described by C. W. de Vis in the *Ibis* of 1897, pp. 250-2, from a specimen collected by Sir William Macgregor in May, 1896, during his journey across New Guinea from Mambare to the Vanapa River. Sir William was then Governor of British New Guinea. His collector, Mr. A. Guilianetti, found that the bird was "pretty common all over the Scratchley Range" up to about 12,600 feet.

Although "pretty common", according to de Vis, the Orange-wattled Bird of Paradise has never, as far as I can find, had a further mention in the literature.

When Mr. F. Shaw Mayer brought one of these birds to the Zoological Gardens on April 29th, 1937, it was the first time that one had been seen alive outside South-West New Guinea. He brought, too, a story which may explain why the bird is so rare in collections. Apparently, most of the natives of the Scratchley Range cannot be prevailed upon to hunt it since they believe that the mere sight of it brings bad luck. Mr. Shaw Mayer had the greatest difficulty in finding

men who were both "unbelievers" and good bird-catchers, though the bird appears to be still as common as it was forty years ago. However, he succeeded in collecting, amongst others, the fine bird which may now be seen in the Tropical House in the Zoo.

KING FERDINAND'S COLLECTION

By PHYLLIS BARCLAY-SMITH

The magnificent collection of birds at Coburg, brought together by the care and thought of His Majesty the ex-King Ferdinand of Bulgaria, is one that would provide weeks of enjoyment and study, but even a brief visit of a few days makes a memorable impression. The birds have in most cases been procured by the King personally on his many travels: wherever His Majesty goes one of the thoughts uppermost in his mind is the study of birds. Though his collection numbers over 800 specimens, he can remember where each one was obtained or purchased, and he knows the names of all, not only in Latin, but in almost every European language. His knowledge of their distribution and habits makes a tour of the aviaries in his company little short of an extensive education.

The main collection is contained in a large house consisting of eighteen aviaries. The whole building is light and airy and each aviary has an indoor and outdoor compartment, the outdoor section being provided with trees and shrubs. Inside there is a central passage, the aviaries, constructed of fine meshed wire and light wood, being ranged on each side and forming a semi-circle at the end. At the other end a door leads to a large room where the food is prepared, and the collection is in charge of two very knowledgeable keepers.

Every aviary is numbered and on the outside is a typed list giving the species of birds contained therein and a note of their habitat. It is perhaps simplest to give a brief résumé of the birds in each aviary. In the first there were mostly European birds such as Waxwings, Hawfinches, and a Water-rail, but, in addition, in a large cage was an Argentine Motmot.

In the second was a large collection of Waxbills including the rare *Estrilda atricapilla* and *E. nonnula* from West and Central Africa, Melba, and Wiener's Waxbills, Violet-eared and Australian Waxbills, Rufous-tailed and Heck's Long-tailed Grassfinches, Chestnut-backed Mannakins, Alario and Cuban Finches, Queen Whydahs and Orange Weavers. There was also a Plumbeous Redstart, Red-crowned Hanging Parrots, and Cape Doves. Though the aviary is so thickly populated, Cuban Finches, Cut-throats, Silverbills, and Common Firefinches have all reared young successfully.

Aviary number three contained a similar collection of Finches, among which Cuban and Red-headed Finches have bred, Waxbills and Munias. In addition, there was a Ruby-throated Warbler, some Three-coloured Parrot Finches, and Chinese Painted Quail.

In aviary number four there was a fine collection of Weavers, many of them busily constructing their nests of blades of coarse green grass, large stacks of which were placed in the corners of the aviary for their use. Some nests were completed and some were nearing completion when I saw them. The bird takes about two or three hours to build a nest and then most frequently pulls it all to pieces again. Here were Grenadier, Orange, Crimson-crowned, and Red-beaked Weavers, and in addition Golden-breasted Buntings and a White-capped Redstart.

There were more Weavers in aviary number five, also Longtailed Whydahs, Redfaced Lovebirds, and Scarlet Tanagers, and, in addition, Black-necked Mouse Birds (*Colius striatus nigricollis*) which have successfully reared young, a notable achievement though *C. striatus* appears to have been bred on two occasions in the British Isles. The Mouse-birds are intensely interesting and queer looking birds—they appeared in fine condition and were flying about and hanging on the side of the aviary, altogether seventeen of them. Red-headed Finches have also bred in this aviary and a Chinese Painted Quail had a family of chicks behind the stack of grass provided for the Weavers.

Aviary number six contained a magnificent collection of Whydahs and Weavers, the brilliant plumage of the cocks making a striking blaze of colour. There were Paradise, Red-shouldered, Red-collared, Yellow-backed, and White-winged Whydahs, several species of Weavers,

Scarlet Tanagers, Blue-cheeked Barbets, Pekin Robins, and Red-crested Cardinals. In aviary number seven was an equally splendid display of colours from such lovely birds as Long-tailed and Pintailed Whydahs, Military Starlings, Rufous-necked, and other Weavers, Scarlet Tanagers, Dominican Cardinals, and a pair of the very beautiful Roulroul Partridges.

Many species of Weavers were in aviary number eight with some Royal Starlings and Ring-necked Parrakeets. Amazon and Grey Parrots, Donaldson's Touracou and White-breasted Grey Touracou, and some Bay Cowbirds were together in aviary nine.

The African Grey Parrots had an aviary to themselves and were in excellent condition. They were provided with hollow tree trunks with entrance holes at intervals and the sight of one of these birds looking out of the tree trunk was most attractive. They thrive very well in the aviary but though one or two of them were pleased to be petted, they are losing their tameness and ability to speak.

In the next aviary was a most engaging Green Barbet (*Thereiceryx viridis*). A very confiding bird which always came to the wire when called and was extremely tame. Also in this aviary were Red-headed Cardinal, Mexican Hangnest, Superb Spreo, Royal Starling, Oxbird, Longtailed Whydah, Diuca Finch, and Spotted-backed Weaver.

In aviary number thirteen was an interesting collection consisting of Dominican Cardinal, Magpie Tanager, Superb Spreo, Royal Starling, Yellow-breasted Barbet, Senegal Parrot, Common Quail, Calandra Lark, and Kaffir Weaver.

Among a number of various species of Weavers in the next aviary, Masked Lovebirds had bred and reared their young and there was also a specimen of the Libyan Thrush.

The Bearded Tit of the race occurring in Russia (*Parnurus biarmicus ruscicus*) and a Cockatiel were with a collection of various European Finches, a Mexican Rose Finch, and also a Masked Weaver. In the next aviary was the beautiful Violet-necked Lory, Mitchell's Lorikeet, a Dominican Cardinal, and various Weavers.

Cut-throat, Red-headed, and Zebra Finches had all bred successfully and were placed with a Red-crested Cardinal, Red-crested Finch,

Scaly-crowned Weaver, Magpie Mannakin, Painted Quail, Short-tailed Munia, Bearded Tits (Russian), and the attractive Black-headed Oriole.

In aviary number eighteen were Black-headed Weaver, Yellow-headed Marsh Bird, Swainson's Lorikeet, and various coloured Budgerigars.

Fischer's Lovebirds breed in large numbers at Coburg and there were about a hundred of them in the last aviary; as always, these birds are most destructive and immediately strip any greenery they are provided with of its leaves.

In the garden are very large aviaries containing a Buzzard, a Goshawk, and an Eagle Owl; the latter fell out of the nest when young and was brought to King Ferdinand. A very tame South African Ground Hornbill named "Franz" enjoys life in a large aviary where he can fly with great ease, and in a similar one is a very good specimen of the Crowned Hawk Eagle, named "Fritz", which has been in His Majesty's possession for eight years.

In the Villa itself, King Ferdinand has rooms entirely devoted to birds, in one of which there are four specimens of the White-headed Woodpecker (*Leuconerpes candidus*), and two of that rare Toucan—*Ramphastos vitellinus*. In another room there is an Ariel Toucan and two Purple-capped Lories, and further four specimens of Sandevall's Grenadier Weaver bird.

The gardens and grounds are kept as a sanctuary for wild birds and every effort is made to render it attractive for them. No old tree is allowed to be cut down or dead branch taken off, in order that the tree nesting birds may find sufficient nesting sites; and nesting-boxes and food are also provided. The Wryneck and five species of Woodpecker, the Green, Grey-headed Green, Great Spotted, Middle Spotted, and Lesser Spotted, all inhabit the grounds. Thistles are cultivated and King Ferdinand has an excellent crop of these plants usually discouraged by gardeners, and he is rewarded by the sight and song of multitudes of Goldfinches which fly in and out among the leaves and eat the seeds quite undismayed by the close proximity of humans. I visited Coburg at the end of July when there was not much to be heard of bird song, but during the spring the grounds must

be a veritable paradise for those who enjoy watching and listening to wild birds.

King Ferdinand is a great scientist and a great lover of nature. He spends hours sitting in his bird house watching his birds—studying their habits, their notes, and their movements. He is equally engrossed in studying wild birds, butterflies, and flowers, and his garden is a memory of journeys all over the world, planted with wild flowers he has brought back from all the ends of the earth. His love of nature is so great that it is infectious and to talk with him is an inspiration to any naturalist.

A CHRISTMAS PRESENT FROM THE BIRDS. BREEDING RED-FACED WAXBILLS

(Pytella melba)

One of the most welcome and charming Christmas presents I received this year was from the birds in the form of three of the dearest little Red-faced Waxbill babies you have ever seen.

I think the Red-faced Waxbill babes are easily the most interesting and fascinating little things we have had the pleasure to breed. Shy, though tame and fearless, they are just like miniature bantams about the aviary. They can't fly a foot high off the ground, and are led about the aviary by their mother. They give one the impression of a unique miniature bantam family, as the whole ensemble marches past, in "Indian file", with their little necks outstretched and stumpy tails erect. Ma walks in front, leading her children, and Pa struts behind in majestic fashion, forming what would appear to be a body-guard. Mother protects her children in a most determined manner. She does not actually fly at you, but she stands in front of her babies in a threatening attitude, screeching vigorously as you approach, and defies you to touch them.

Their home is in a two pound jam tin, fastened against the wall inside of the bird house, about six feet from the ground. Out of this they come to earth, somehow, every morning. But, unable to fly, as yet, they cannot get back again, so every evening my wife catches them up and places them back into the nest.

Just like little children, so good and sweet, they seem to know it is bed time, and all huddle themselves together for my wife to catch them.

The nest was built of green grass and capok, and four bluish-white eggs were laid. This was their third attempt. First they persisted in building between the top of a glass window, which is let down every evening, and the wire of the flight. With this continuous disturbance each evening, they soon grew "fed-up" and engaged a jam tin inside the bird house. There they built a cosy cup-shaped nest with a scanty dome to it, and sat for a few days. But for some unknown reason they suddenly gave notice, and eventually built a hurried, rough and ready cup-shaped nest, without a dome, in a jam tin farther along. This sudden change of address still remains a mystery, for both tins were exactly the same.

However, here they got down to serious business, and both cock and hen took turns at sitting very closely, and were not easily disturbed. Incubation lasted approximately three weeks (I did not keep dates) and four young were hatched.

One was found dead on the floor one morning, apparently having been thrown out by the parents. The remaining three are all bonny little fellows. In colour they are exactly the same as their mother, with the same scaly effect on the breast, bronze-coloured wings, and maroon tail. The usual staple seeds, canary, millet, manner, a little teasel, niger, and rape were available, plus various green seeding grasses, soft food, and live food. Immediately after hatching, the parents most noticeably demanded live food. They met one at the door and hung around until the termites and mealworms were placed on the feeding table. Then they would gorge themselves on them, and immediately fly to the nest and feed the young. My wife sometimes used to tease them by walking right around the aviary with the dish of termites, and it was most amusing to see how deliberately they chased after her.

My wife loves caring for these little things, and I don't think I will be wrong in saying that, of the number of species we have been fortunate enough to breed, none have given her greater pleasure than Red-faced Waxbills.

A CHAT ABOUT THE KEA

By JAMES CASSIDY

When George R. Marriner set out to visit the Kea country it was to satisfy his deepest longing to see for himself one of the most interesting creatures in a land where the interesting abounds. Marriner went alone as at the last moment his chosen companion failed him. Omitting description of his journey, and its astonishing natural features, we stand with him, by the aid of imagination, at the top of the mountain-pass, gazing across a succession of endless snow-clad peaks. A dray track winds easily down for a mile or so to the river bed. Here, in ancient days "the giant moas must have settled in search of food".

Three mighty rivers unite their forces and charge down the gorge to the plains with a terrific thunder. All the surrounding peaks contribute to their reinforcement. To quote Mr. Marriner, "rush from the terminal faces of the glaciers; tumble from the snow-line; ripple and bubble through the cushion-like vegetation of the higher slopes. Down amid the dense bush they tumble forming numerous cascades and waterfalls."

The Rakaia River cuts its way for 14 miles over shingle-bed, about a mile wide, then it rushes for another eight through a narrow defile amid some of the grandest gorge scenery of the Dominion. Ranges capped with snow stand away to the left and, girdled with glaciers, stride across the valley. The great shingle slips, which it is claimed are unequalled for size and abundance in any other part of the world, are met and kept in place to a certain extent by the living indomitable tussock.

Scattered here and there over this vast wilderness are a few lonely homesteads, with shearing-sheds and shepherds' huts the only dwellings, and often separated from each other by miles of mountain range and stony river-bed. Terrific storms rage here, and blinding drifts of snow make riding horse-back but a stumble, until it becomes altogether impossible. The mighty frosts clutch everything, as in a grip of iron. It is a land of awful distances where a false step may mean death, sometimes slow and lingering. This band of Alpine country forms the backbone of the South Island of New Zealand, stretching for about

480 miles from one end of the island to the other. Still quoting Mr. Marriner, we may add, "It is composed of long parallel ranges of mountains, many thousands of feet in height, crossed all along their length by shorter transverse ranges, which taper out to the plains. In between these ranges the rivers run, fed all the year round by the Alpine snows and cutting out deep gorges between the mountains which form picturesque defiles opening to the plains." Southward, ever southward, the mountain ranges become higher, until the chain is crowned by Mount Cook, or, to give it its Maori name, Aorangi, "the heaven-piercer."

"This long stretch of Alpine Country is the home of the Kea . . . here, in a region of mountain, forest and flood, the bird has flourished for centuries, until man came, unbidden."

But, and this it is well to remember, the Kea, although often circling the snow-clad peaks, more often swoops down to where forest and river-bed meet to revel among the foliage.

DESCRIPTION OF THE KEA

The Kea is the New Zealand Parrot (*Nestor notabilis*) and is about the size of one of our Pigeons. Mr. Malcolm Ross writes of it as a mountain Parrot of beautiful plumage, but Mr. Marriner writes, "there is nothing very graceful about the Kea, neither in appearance nor movement," and he lays great stress on the "waddle" and "general clumsiness" of the bird. He admits that the plumage varies in intensity of colouring according to the age of the bird and the season of the year.

Olive-green, black-edged, brick-red, and metallic-blue tints are to be seen in the plumage.

The upper mandible, or beak, is long and much curved, towards the tip taking on a brownish-black colour, but yellow-tinted at the crown. The lower mandible is nearly straight and much shorter than the upper. It is of a lighter colour than the upper beak and lightest in the young bird.

There would not appear to be any blue-eyed Keas. The colour of the eyes is a dark brown, approaching black, as the bird ages. Each eye is encircled with a yellow ring, and the same vivid colour appears around the nostrils.

The female Kea is less beautifully attired than the male, her plumage being duller. She is not so robustly built as her lord and her beak is not so stout and powerful.

Professor Haslam, of Christchurch, tells that he once saw in an Otago Homestead a stuffed Kea that was almost an albino. Some kindly person procured a specimen for Sir W. Buller, the famous ornithologist whose book on birds is still a standard work. The specimen was procured from the interior of Otago and was "bright canary yellow with a few red feathers interspersed throughout the plumage; vivid red on the rump and upper tail coverts as well as under the wings. Such a gorgeous bird has never been seen in the district before".

FOOD OF THE KEA

The natural food of the Kea is that of the berries of various Alpine shrubs and trees, roots of herbaceous plants, grubs, such as are found in dead trees, honey from the flax-seed. (Cherry trees, when the fruit is ripe, should it be so fortunate as to find them; lettuce and dandelions, and Maori onions are much liked by some of the tame Keas kept by bird-fanciers.)

NESTING

The Kea might have possessed an almost prophetic foresight that in the years to come would show it surrounded by countless enemies, so inaccessible, almost impregnable, are the places selected for its nesting. Surely no fortress was ever chosen by man stranger and safer from molestation than the Kea nesting-grounds! Precipitous, unapproachable, and defying intrusion by human hands are their breeding-places.

Mr. Marriner, aptly quoting Mr. T. H. Potts, sets down this description: "It, the Kea, breeds in the deep crevices and fissures which cleave and seam the sheer faces of almost inaccessible cliffs that in places bound, as with massive ramparts, the higher mountain spurs. Sometimes, but rarely, the agile musterer, clambering amongst these rocky fastnesses, has found the entrance to the run used by the breeding pair and has peered with curious glances, tracing the worn track till its course has been lost in the dimness of the obscure recesses beyond the climber's reach. In these retreats the home, or nesting-place,

generally remains inviolate, as its natural defences of intervening rocks defy the efforts of human hands unless aided by the use of heavy iron implements that no mountaineer would be likely to employ."

However, it is not always that the Kea chooses such breeding-places, although no doubt they are favourites. If these rock-tunnels are not available a cairn of stones, or even a hole in a clay bank, may be selected. In a fine photograph secured by Mr. Marriner after overcoming many acute difficulties, he shows the natural entrance to a Kea's run, and the hole goes 10 feet into the rock. The Kea's breeding season commences about June and runs on to September. It is a curious fact connected with the Kea that the bird constructs its nest, lays its eggs, hatches and rears its young, all during the severest months of the New Zealand winter. Cold winds and snow and frosts, which turn everything into a solid frozen mass, do not deter them. It has been suggested that this nesting in mid-winter may be that it enables the young to be fully developed before the severe weather again comes round.

THE EGGS

The Kea egg is about the size of that of a domestic Pigeon; it is white in appearance with rough shell and no markings. There are usually four eggs. The young birds stay in the nest for a long time, three, four, or even more months. As fledgelings they smell particularly unpleasant and are the most helpless of creatures, even when the size of young adult Pigeons. There is indeed very little in the young Kea that portends its future liveliness and brightness, its intelligence and mischief.

THE KEA AT PLAY

Character often comes out in play. When the young birds are at last able to move about with agility they are extremely amusing. No one who has Keas about them can suffer from dullness. Here is a description from a party which had pitched its tent in a Kea district: 'while you are driving one bird away from the tent another will be trying his beak on the coat that you have hung up on a tree for safety. With their merry eyes and their shining coats, their perky ways and their tameness and extreme inquisitiveness, they are welcome and unwelcome at the

same time.”. . . They will often pay a visit of inspection to the tent and keep one on the *qui vive* as to what new mischief they will do. Perhaps you hear them rattling the cooking utensils about. That is the merest trifle ; but when they begin to tear the tent, there is nothing to do but to get up and strike camp as soon as possible.

In a book, *Climbing in the New Zealand Alps*, by Mr. Fitzgerald, the author says, “ The Kea Parrots disturbed our sleep that night by walking up the iron roof, and (to judge from the sounds), tobogganing down and falling off the edge, with shrieks of terror and rage.”

No end of amusing stories are told by travellers in the Kea country of the instinctive love of mischief in the Kea. There is frequently a good deal of method in the ways of the bird. One traveller tells how he was resting on a hill when a Kea alighted on his shoulder. He says : “ I caught him and put him in a box an inch thick, but he cut it through by the morning and got out. I then chained him with a dog’s chain, with a leather strap round his leg. The Kea would run the iron chain through his beak until he got to the leather and then with a stroke or two of his beak he cut it right through.” They have marked intelligence and see through snares and traps of all kinds, and evince clever and original methods of rendering them useless, seeming, as they fly away, to screech with wild derision at the would-be trapper.

THE CHANGE-OVER FROM THE HARMLESS PLAYFUL BIRD TO A BIRD OF PREY

“ Before the advent of the white man there were no four-footed animals in New Zealand, except perhaps, a native rat,” says Malcolm Ross ; “ my own idea is that it was its inordinate inquisitiveness that led to the change (in Kea food and habits) which was brought about in an accidental manner : When the early settlers in the mountains killed a sheep they spread the skin, woolly-side down, on the stockyard fence. The ever curious Kea swooped down upon it, and began to tear it to pieces with his strong sharp beak ” . . . then came “ the cold winter, when all the berries were done ” and the snow lay thick, and no grubs were available. Hard up for dinner the Kea flew down into the valley and finding no sheep-skins about he went back to the mountain-side and settled upon a live sheep ;—there he got his dinner !

Soon the other Keas who had been unable to dine discovered the replete bird and made eager inquiries, and “for many days afterwards they all dined well”.

The sheep, which had never before found the Keas unfriendly, were taken by complete surprise. The owners of the sheep saw, with amazement, the great holes made in the sides of their sheep, and saw some of them writhing in agony on the ground. At first they could not discover what had caused the trouble. But one day a shepherd, watching through a spy-glass, saw a Kea alight on the back of a sheep and begin to dig with its cruel strong beak into the loin of the living animal; to and fro ran the defenceless sheep, the Kea, undaunted, keeping to its victim, which was released from suffering only by death. Thus Mr. Ross.

Mr. Marriner, wishful to extract the truth and nothing but the truth as to the guilt or innocence of the accused Kea, made very carefully guarded investigations and took strict precautions to make the evidence as reliable as possible, and in order to ensure this refused any evidence but the accounts of actual eye-witnesses, each willing to swear to the truth of his evidence before a Justice of the Peace, if necessary; and he is of opinion that as far as human evidence can be relied on for its veracity it is conclusively proved that the Kea does actually attack and kill sheep.

Very much more might well be written about the Kea: of the price placed on its head; of the Kea-hunting, resulting in the slaughter of thousands of birds, by gun and by poison. Kea-hunting is taken up by men all over the Kea country. The extreme inquisitiveness of the birds is often in the hunter's favour. The devices for attracting them are innumerable and ingenious, the result being long strings of Kea-heads, for which as much as 10s. per head has been offered and paid, together with the hunter's expenses; the price to-day is half a crown—but space forbids. In spite of all efforts directed against them the Keas are still proving a cause of grave trouble to New Zealand sheep-farmers.

Inquiry made the other day of the Intelligence Officer of the Dominion of New Zealand, elicits the statement that “these birds are still proving a cause of trouble to New Zealand sheep-farmers and

that they have spread from the southern end of the South Island of New Zealand, right to the Marlborough Province in the north-east corner of the Island". . . .

STELLER'S SEA-EAGLE

(*Thalassaëtus pelagicus*)

There is one example of this most interesting Sea-Eagle at the London Zoo, which was obtained through an exchange with Moscow Zoo Park. In colour it is principally black and brown, with a white wedge-shaped tail and thighs, and white on the lower part of the back and wing coverts. It is about 41 inches in length, one of its peculiarities is that it has fourteen tail feathers instead of the usual twelve of other Eagles.

This bird was originally discovered by Steller. It feeds on young seals, foxes, and Ptarmigan, also on dead fish and other carrion. Its eggs are broad and of somewhat pointed oval form, being plain white in colour. The shell is slightly rough and entirely without gloss.

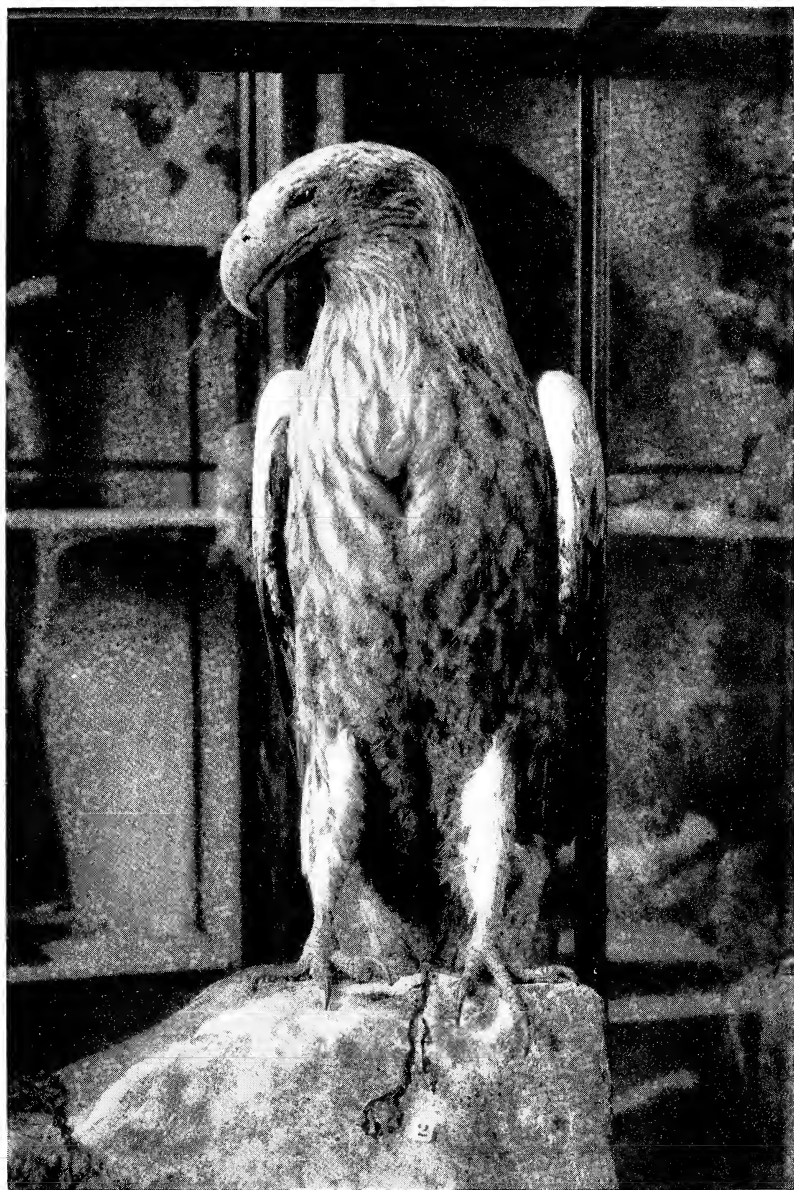
There is a very fine exhibit in the Natural History Museum of these birds, one of the specimens which the plate of this bird is taken from. Its habitat is in Kamatschka and the Japanese Islands.

THE BREEDING IN CAPTIVITY OF THE LITTLE BUSTARD-QUAIL

(*Turnix velox*)

By ALAN LENDON, F.R.C.S., Adelaide

The Little Quail, or, as it is more frequently called, the Button Quail, is distributed widely on the mainland of Australia but is always a rarity in captivity, although in some seasons it is common in the oat crops in this state. It was not till December, 1936, over a year after I first started keeping Quail, that I managed to secure a specimen of this bird, finding one in a small grain store where a few birds were kept as a sideline. This bird, a female, was obtained for the modest sum of half a crown. About a month later I secured two males from a friend who had bred the species in captivity some years previously,



STELLER'S SEA-EAGLE.

[To face p. 78.]

I believe the only other recorded breeding. When first introduced the female bullied them so much that I had to place them in an adjoining pen for a few days, but thereafter all was well and I parted with one of the males to the Adelaide Zoo where there was also a solitary female. Her greeting to the male was quite different from my bird's, she immediately displayed to him with the accompanying booming note, just like that of the Painted Quail (*T. varia*), only not so loud, and there was no persecution. Once settled down my pair continued amicably together and on 28th August, 1937, I discovered a white egg with brown speckling in a nest made of a few pieces of dried grass situated amongst the roots of some growing grass. A second egg was laid on 30th August and a third on 1st September, and the male commencing sitting after the second egg was laid. At no time prior to the eggs being laid had I seen or heard the female displaying to her mate, but thereafter she usually did so when the male left the nest to feed, but I never saw her go near the nest. About midday on 13th September, I found the male brooding two chicks, the third egg was just chipped and still in the nest and I removed it and placed it in an incubator and although the chick hatched its legs were deformed and it had to be destroyed. The two chicks naturally hatched were tiny, as can be imagined from the size of the adults, dark brown in colour, with a lighter stripe down each side of the back. They were looked after solely by the male and I had to remove the female the same evening as she was attacking both the male and the chicks. The male caught numerous small insects for them which they took from his beak and they also relished chopped up mealworms and small earthworms which the male would pick out of freshly turned-up earth for them. When three days old they began to attempt to pick up fragments of food for themselves. On the fourth day I found one chick dead but the survivor continued to flourish and grew rapidly and at the end of five week's time was as large as and practically indistinguishable from its father. Continuing to grow, by the seventh week it was as large as the mother and, having undergone a partial moult, acquired the plumage of the female. Having removed the young bird when it was about five weeks old and replaced the female, another clutch of three eggs was laid almost immediately but these proved infertile.

TWO INTERESTING WADERS

By W. H. WORKMAN

In the middle of June a friend gave me a pair of young Curlew (*Numenius arquata*) which he had caught on his moor. They were pretty well fledged but unable to fly and with quite short beaks. Naturally I was most anxious to keep them alive and well. I thought the best way would be to put them into a largish aviary where I have three beautiful Black-tailed Godwits, my idea being that the Godwits, which are quite like Curlew with the beak turned slightly up instead of down, would soon teach them where to find their food. This happily proved to be correct and instead of finding two dead Curlew I found them growing rapidly and now they are fully adult with curved beaks.

I feed them on a staple diet from a glass bowl containing Spillers biscuit meal mixed with one-third boiled rice well scalded with boiling water. Two or three times a week they get raw heart cut up fine and mixed through the scalded meal. Besides this they get a smaller bowl of bread and milk. This they are very fond of and seem to go for it before the biscuit, but both are finished by the morning. For live food I give occasionally a few earthworms and also now and then some mealworms. They have plenty of clean water in the form of a little shallow pond in which they delight to wade.

About August they started to call and it is very pleasant when one is awake at night to hear their weird and lonely whistle, now and again being answered by some wild Curlew passing overhead. I do hope my neighbours listen to their call with the same pleasure that I do, wafting one back to the wild moorland mountains where the Curlew spend their breeding season, but perhaps they just turn round on their pillows and say to themselves, "I wish Workman would take his — birds out of this." Who knows? I, for one, never inquire.

Like misfortunes, blessings never come singly and the same kind friend very shortly afterwards brought me a pair of fledgeling Ring Plovers (*Charadrius hiaticula*) from Strangford Lough, perfect little birds nearly able to fly. Well, I thought to myself, there is little hope for these Curlew are all very well, there is something to work on, but these little mites, what a hope. However, there they were and

it was up to me to do my best. I put the little fellows into a small aviary inhabited by a flock of Zebra Finches. I could keep an eye on the feeding, which at first consisted of hard-boiled egg chopped up with fine biscuit meal and boiled rice which, with a few earthworms and mealworms, they took to at once, never looking back, very much to my surprise.

After a week or two I gradually introduced the ordinary insect food mixed with boiled rice, grated carrot, etc., and dropped the egg, substituting very finely minced raw heart. This they get three times a week and now I am giving them a little of the scalded Spillers biscuit meal as well. They are very dainty little birds and most interesting to watch as they are quite tame, running about nodding their heads backwards and forwards, sometimes standing on one leg in true wader fashion or giving their plaintive little whistle.

It is a great pity Waders are so difficult to get nowadays, they are really not so hard to feed and to me they are about the most interesting aviary birds we have. Perhaps it is because I have always loved to watch them in their wild state, and as for their nests and eggs there is nothing more beautiful in nature.

ORNAMENTAL PHEASANT SOCIETY NOTES

An account of the Pheasant section at the Palace Show was given in last month's Magazine and there is little need for further comment. The general public showed a keen appreciation of these birds and the special lighting showed a great improvement on that prevailing last year. I must mention one remarkable exhibit. A Chinquis Peacock Pheasant of quite recent importation was one of the steadiest Pheasants on view, it gained the first prize in its class and was awarded the special prize for the best Pheasant exhibited. Surely this finally proves that Pheasants can be exhibited with safety and honour to the Society. The O.P.S. Annual General Meeting was attended by sixty-seven members, and we considered this number most satisfactory. Mr. Balfour was elected to the Chair in the absence of M. Delacour: his chairmanship

was marked by a rigid determination to insist on members adhering to the points under discussion, thus the meeting went off in splendid style and we were grateful to Mr. Balfour for his ability in this matter. There can be no doubt that the manner in which Pheasants were classified last season did not meet with the approval of our members, and in future there will be four classes instead of three, and Goldens and Amhersts will be separated. If the enthusiasm shown by members at this meeting is reflected by an increased number of keen exhibitors, it will be most gratifying. At last our members appear to be aware of the fact that Pheasants are most adaptable for showing purposes: it is now an established fact. At this meeting a new Committee was formed, some new members will undoubtedly strengthen our forces and I must congratulate Miss Greenyer, Messrs. Malisoux, Edwards, and Major Elliott Benham on being elected. We all regretted the absence of our President, M. Delacour, but it was unavoidable. A hearty vote of thanks was accorded him for his gift to the Society of the coloured plates which adorn our Journal. Without such generosity we could not possibly afford to present two coloured plates with each half-yearly issue. We were pleased to welcome several members from the Continent, these included Dr. J. Derscheid, Messrs. F. Fooks, G. Blazer, and Schuyl, their enthusiasm was most infectious. Also congratulations to Mr. Fooks for the able manner in which he judged the Pheasants: his judgment was faultless. The thanks of our Society are due to Mr. and Mrs. Bennett for the most able manner in which they made all arrangements at the Palace Show. There is a lot of forecasting to be done and nothing was neglected. Also our thanks to Mr. F. E. Thomas for coming to our assistance at a vital moment. It was found that hessian was not allowed at the Show as it is of an inflammable nature: Mr. Thomas kindly provided, free of charge, hessian which had been treated and made non inflammable.

JEROME LAMBERT.

FACTS AND FIGURES

By THE MARQUESS OF TAVISTOCK

The following analysis of the breeding and health results in a big collection may be of interest.

The birds were housed in twelve fixed aviaries of varying sizes, with tiled floors; in a large number of movable aviaries the great majority of which were 24 ft. by 8 ft. by 8 ft., and contained one pair only; and, in the case of new arrivals, temporarily, in cages in bird-rooms.

The period under review is really somewhat less than twelve months, for although the first pairs were transferred from Peasmarsh to Haywards Heath about a year ago, the process of moving continued for several months and the last birds did not arrive before May. With the exception of two Birds of Paradise, the whole lot were members of the Parrot family.

The total number of birds to come under consideration is 266, of which eighty-nine have been in the collection for nine months or more, while the remainder I have had for periods varying from several months to a few days.

The following species are included:—Grey, Blue-fronted Amazon, and Racket-tailed Parrots; Queen of Bavaria and Red-breasted Conures; Gang-gang, Leadbeater's, Roseate, Banksian, and Palm Cockatoos; Blue-crowned Hanging Parrots; Solitary, Tahiti Blue, and Ultramarine Lories; Yellow-mantled Rosella Parrakeets, Mealies, Brown's, Adelaides, Pennant's, Yellow-rumps, Yellow-bellies, Stanley's, Barnard's, Hooded, Bluebonnets, Splendid, Turquoise, Rock Grass, Blue-winged; Australian, Green-winged, Amboina, and Salwalty King Parrakeets; Crimson-winged Parrakeets, Barraband's, Rock Peplar, Yellow-fronted New Zealand, Indian Ring-necked, Plumheaded, Layard's, Slaty-headed, Derbyan, Malabar, and Swift. Hybrid Barraband \times King and Slatyheaded \times Plumheaded Parrakeets; Nyassa Lovebirds; Rothschild's and Princess Stephanie's Birds of Paradise.

The total number of deaths (exclusive of unfledged nestlings) has been 27, 15 of which have been birds of the year bred in the collection.

As is usual in a well-managed collection, the summer and early autumn months have been the most fatal and the cold months the most healthy, owing, presumably, to the fact that low temperatures are inimical to many bacteria harmful to birds. By "a well-managed collection" I means one where the birds are not only correctly housed and fed and not overcrowded; but where individuals dangerous to each other are not forced to occupy the same quarters and delicate species are not obliged to endure temperatures too low for their safety and comfort. I provide abundant heat for all newly-imported birds and, in the aviary shelters, for the Lories, late-breeding Hooded Swifts, Grass Parrakeets, Racket-tailed Parrots, Red-breasted Conures, young Derbyans, and Birds of Paradise. The Banksian Cockatoos and many of the young Broadtails have very slight heat in their shelters, as have the Queen of Bavaria Conures, Blue-fronted Amazons, and all the members of the Ringneck family during periods of intense frost. The provision of a little warmth during hard frost is desirable for members of the Ringneck family (absolutely essential for Malabars) to protect their toes from damage, spoiling them for show, and in bad cases for breeding. The causes of death from disease were:—

Septicæmia, 7 cases; enteritis, 4; paratyphoid, 3; congestion of the lungs, 3; pneumonia, 1; infectious disease of the liver, 1; colon infection, 1; gastritis, 1; pericarditis, 1; and heart failure, 3.

Septicæmia claimed a newly-arrived Rock Grass Parrakeet, 2 young Rock Peplars, 2 young Yellow-mantles, and 2 young Adelaides; paratyphoid, 2 young Crimson-wings and a young Adelaide; congestion of the lungs, a young New Zealand, a Rock Grass, and a Yellow-belly; pneumonia, a young Ringneck; infectious disease of the liver, an Adelaide; gastritis, a young Swift; pericarditis, a young Ringneck; colon infection, a Rothschild's Bird of Paradise; and heart failure, a New Zealand, a Splendid, and a Roseate Cockatoo.

January was responsible for one casualty from disease; February, March, and April had no deaths; May had 1—a new arrival; June, 2; July, 8; August, 6; September, 3; October, 1; November, 2; and December, 2, one of which was a rickety, newly-fledged youngster. This casualty list is a fairly normal one for a tolerably healthy district,

the most remarkable feature being, perhaps, the absence of loss from liver and kidney troubles—one case only, a hen Adelaide kept in one of the fixed aviaries. It is possible that this rather unusual degree of immunity may be due to the provision of minerals, especially Iodine Nibbles. Only two species did very badly—Rock Grass Parrakeets, all four of which got ill and died at one time or another; and New Zealand Parrakeets, of which the breeding pair and one of their four young ones were lost.

About thirty-eight birds fell ill and recovered. The majority showed symptoms of ordinary enteritis, but two—a Barnard and a Blue-bonnet, both new arrivals—were cases of catarrhal enteritis, the seed passing through them undigested. They were cured by being fed on soaked seed and being kept at a temperature of 85° F.

A cock Layard, which became badly paralysed, made a slow but remarkable recovery and the same was true of a young Swift which lost the use of its wings and to some extent of its legs and breathed badly with open beak. This latter case is the first instance I have ever known of a bird recovering when it has begun breathing with its beak open.

There were four cases of ordinary egg-binding—three Ringnecks and a Mealy Rosella. All these hens were saved by heat (no oiling), and all sat, though some were in hospital many days. Two reared their young; one hatched but lost her young; and one had her egg accidentally destroyed when near hatching.

An Ultramarine Lory twice had trouble with a soft-shelled egg, not being in the best of condition when she insisted on trying to breed. As she proved unable to lay the egg naturally, it had to be removed, a difficult and dangerous operation which my aviary attendant was fortunately skilful enough to perform successfully.

One case of a “captivity vice” occurred—feather-plucking in a young Mealy Rosella, for no obvious reason.

As already indicated, an experiment has been tried for the first time in providing all the birds with an abundant supply of minerals in the form of rock salt, cuttle-fish bone, charcoal, and Iodine Nibbles.

The latter seem to be appreciated to a greater or lesser degree by almost everything in the collection, with the exception of the Lories, adult Derbyans, Hooded, Queen of Bavaria Conures, and Lovebirds.

Bluebonnets, Crimsonwings, Kings, and Barrabands seem to be particularly keen on them ; also the Gang-gang Cockatoos.

A trial was also made of giving daily a very small quantity of sweetened bread-and-milk, a piece about the size of the last joint of the finger for each bird. This is eaten voraciously by the Gang-gang Cockatoos and occasionally by the Leadbeaters and Banksian. It is also much appreciated by the Amboina Kings, most of the Crimsonwings, Barrabands, and Rock Peplars, some of the Common Kings, the Amazon and Grey Parrots, some of the Layards and Plumheads, the Conures, Swifts, and some of the young Ringnecks. It is more or less ignored by the Broadtails with the exception of some of the young birds bred this year. The Roseate Cockatoos, Malabars, and Palm Cockatoos also do not care for it.

I tried the experiment of giving twice a week a very small quantity of cooked beef fat. This is much appreciated by the Gang-gang Cockatoos, the Amboina Kings, and by some of the Common Kings, but is ignored by most of the other birds.

It is generally noticeable that young birds bred in captivity are more ready to try new experiments in diet and take to new foods than their wild-caught parents. This may be partly due to the curiosity of youth, but their need of certain food elements, absent in the normal diet of captivity, may have something to do with it as well.

Young birds whose parents were taking bread-and-milk freely when they were feeding them in the nest, were, as a rule, rather noticeably large, fine, and well-grown on leaving the nest, although they did not appear to be better able to resist infectious disease than those of their fellows who were somewhat less well-grown and had been reared on seed and green food alone.

The breeding record now remains to be considered. In some ways the past season was not an altogether fair test, as the birds were being moved to a new locality until the spring was well advanced. Surprisingly few former breeding pairs were, however, upset by the move, and in the three or four cases where they did not settle down and lay this season, it was almost invariably when they had had to be moved to a new aviary some weeks after their arrival at Haywards Heath,

i.e. they had to endure not merely a single move to a new situation, but a double one.

The total number of pairs that had some sort of real chance of nesting was 54, but this includes a certain number of individuals which, though acclimatized, were only obtained in the middle of the breeding season.

Of the 54 pairs, 20 reared good and perfect young ; 3 had broods, some members of which were fair specimens and some were rickety ; 2 reared rickety broods ; 7 lost their young in the nest ; 1 had infertile eggs ; 1 had their eggs accidentally destroyed ; 1 laid but would not sit ; 1 are now sitting for the first time ; 1 produced soft-shelled eggs ; 2 got as far as pairing but did not lay ; and 13 examined their nests but got no further. None took absolutely no interest in their nests, and 5 unmated hens laid and incubated infertile eggs.

The total of young birds hatched was 97 ; the total of strong young reared 66 ; one probably strong young bird was killed by cold ; another probably strong young one by neglect of the foster parent ; 2 indifferent, though not actually rickety, young were reared ; 15 rickety young lived to leave the nest, of which 7 improved and survived, and 5 died by accident or were destroyed ; 12 presumably weakly young died in the nest, not appearing to be neglected by their parents.

Two cases of egg-eating by cocks occurred, the offenders being a Grey Parrot and a Roseate Cockatoo, the latter having exhibited the vice before he came to me.

There was one example of vicious and abnormal breeding behaviour, a cock Mealy Rosella attacking and injuring his mate without any reasonable provocation.

One of the most noteworthy features in the record is, perhaps, the very low percentage of infertile eggs : the Plumheads concerned in this case also proved infertile last year, although they were seen to pair.

Considering the record of the various species in more detail, one pair of Yellow-mantled Rosellas reared 7 strong young ; two pairs of Mealy Rosellas reared 5 and 2 respectively, and a pair of Pennants 6. Adelaides reared 7 young, 3 strong and 4 rather rickety. Stanleys lost their brood in the frost ; the hen Yellow-belly, an aged bird probably

going back, laid three eggs and would not sit ; and Brown's and Yellow-rumps got no further than looking at their nests. Ringnecks reared 6 good young, including 2 lutinos, and 1 new hen mated to a defective lutino-bred cock lost her young one in the nest. One pair of Plum-heads lost their young in the nest and another reared 4 rickety young which were killed by accident and by vermin. A Slaty-head paired to a Plumhead reared good young, as did a pair of Layards, Malabars, and Derbyans. Other completely successful pairs were Swifts, Tahiti Blue Lories, Rock Peplars, Kings, and Yellow-fronted New Zealands. Two pairs of Crimsonwings did well, but a third pair had two rickety young and one good one. Leadbeaters' Cockatoos reared rickety young and Roseates, Blue-fronted Amazons, and Racket-tailed Parrots lost their young in the nest. A young Grey Parrot hatched very late also died in the nest but was almost certainly killed by cold. Hooded Parrakeets very late in the year reared, in a heated shelter, one fair young one and 3 rickety ones. A Barraband paired to a King, reared 3 strong hybrids and one inferior one, not, however, rickety. A pair of Solitary Lories are incubating at the time of writing.

MACAWS BRED IN CONFINEMENT

By Dr. E. HOPKINSON

Recently two inquiries about this and a letter from Mr. Allen Silver about a hybrid breeding success in Essex, have made me look up my records.

These will interest the inquirers and, I hope, others.

BLUE AND YELLOW MACAW (*Ara ararauna* (Linn)).—The earliest record is to be found in Lauder and Brown's *Parrots* published in 1833. Here we have a good account of real success between 1818 and 1822 at Caen in France. In that period 62 eggs were laid in 19 broods ; 25 hatched and 15 of the young lived to good old age.

In *Die gefiederte Welt*, 1901, p. 303, there is an account of success

with Herr Sharland in Germany; a pair nested in a cupboard and reared one young one, which left the nest at 94 days old. Another German success is given in the same paper, 1932, p. 110.

In Western Australia this Macaw was bred by Mr. Padbury from about 1926 to 1935. They were bred in glorified poultry runs and when I was there in 1932 there were two pairs of home-bred birds in the aviaries. The old birds nested every year, but none of the young had yet shown any desire to follow their example.

The following hybrids are on record :—

BLUE AND YELLOW \times RED AND YELLOW MACAW (*ararauna* \times *chloroptera*).—Bred at the Dresden Zoo in June, 1897, *teste* Neunzig's *Fremdlandischen Stübenvogel* (1921).

A friend of Mr. Silver's has bred a hybrid "Blue and Yellow \times Red and Green Macaw" this year, which was nine weeks old and doing well when reported. Mr. Silver is almost sure that the hen was *chloroptera*, which is also often known as the "Green-winged" Macaw. Perhaps this will produce further good news of the event.

Hybrids with the male RED AND YELLOW MACAW (q.v.), have also been obtained.

RED AND BLUE MACAW (*A. macao* (Linn)).—Bred in the U.S.A. by Holmes *teste* the list given in *Aviculture* (U.S.A.), January, 1932, but no details were supplied.

In the Zoo in 1901 there were four hybrid Macaws, *macao* \times *militaris*, which had been bred in Milan, Italy; see *P.Z.S.*, 1901, p. 279.

RED AND YELLOW MACAW (*A. chloroptera* (Gray)).—Two were reared at liberty in 1936 at Lilford, and one young bird had been reared several years earlier *teste* Moody in *AVIC. MAG.*, 1936, 338.

Hybrids with the male BLUE AND YELLOW MACAW (q.v.), are recorded, and I saw in New Zealand three hybrids whose parentage was :—

RED AND YELLOW \times BLUE AND YELLOW (*chloroptera* \times *ararauna*).—These were bred at Wanganui by a Mr. Anderson. The first success was in 1930 or 1931; and when I saw them in 1936 there were three young of different years all doing well. See *AVIC. MAG.*, 1932, 220; 1936, 83 (photo).

MILITARY MACAW (*A. militaris* (Linn)).—Hybrids with the male

RED AND BLUE MACAW were bred in Milan about 1900 and exhibited at the London Zoo in 1901. See above.

ILLIGER'S MACAW (*Ara maracana* (V.)).—Neunzig says that this Macaw has been bred with success in a cage in Germany, but I know no details. They were bred at the London Zoo in 1931, two young being reared *teste* Seth-Smith, AVIC. MAG., 1931, 226. The young thrived, and one I saw in Miss Knobel's bird-room in 1935, a delightful tame bird.

SPINY-CHEEKED HONEYEATER

(*Acanthagenys rufogularis*)

By S. HARVEY

In February, 1936, a number of Spiny-cheeked Honeyeaters were caught in the Pinnaroo District and have been in my aviaries since that time. On 13th October a pair was first seen building a nest in an ash tree about 10 feet from the ground. On the 19th there were two eggs, and two young were hatched on 2nd November. Both parents were feeding white ants and meal-worms. All went well until 5th November when it was noticed that one young was missing, and no trace of this could be found anywhere in the aviary. Possibly the parents thought they were not getting sufficient food for the two so decided to dispose of one. The remaining young bird continued to thrive until Saturday, 6th November, when I thought its end had come. I returned home at 6 p.m. and took meal-worms in. These could not be placed in a dish as other birds would get them, so I stood about 15 feet away from the nest and threw the worms, which were caught in mid-air, to the parents. It was not an easy matter to find the parents as there were nine Spiny-cheeks in the aviary, the only way to recognize them was to watch if they ate the worms or held them in the beak—the parents were never seen to eat a worm, but would pack several in their beaks. On this particular day they secured the worms and went to the nest, but did not feed the young bird. After waiting some time I went to the tree and found the young one on the ground, cold but still alive. The nest was inspected and found to be loose on one

side, evidently allowing the young one to slide out. The nest was tied securely in two places with binding wire and the baby replaced. Within a few minutes the old birds fed it, and yet they would not feed it while on the ground. The way they went to the nest with worms when the young one was on the ground appeared as if they were asking for something to be done. On Sunday morning, 14th November, eight days after falling out of the nest and twelve days old, the young bird left the nest, well feathered and able to fly.

The colouring appears to be identical with that of the old birds, the tail is about $1\frac{1}{2}$ inches long.

Feeding.—White ants, mealworms, yolk of egg and cake, bread and milk, honeywater with bread soaked in it. They were only seen feeding ants and mealworms.

24th November, 1937.—The young one is still alive and looks exceptionally well, not yet independent.

PS.—I would be interested to know if Honeyeaters have been reared in captivity.

CORRESPONDENCE

THE TAHITI BLUE LORY

MADAM,—I find that a correction is necessary in my description of the colour of the down of the nestling Tahiti Blue Lory. Owing to the bad light I must have mistaken sprouting feathers for down when I made my observation of the first nestling. More careful examination of the two young of the later brood shows that the down is sparse and is grey in colour, not black. The Solitary Lories' first attempt has unfortunately ended in failure. One egg disappeared, and the nestling in the other died when half out of the shell.

TAVISTOCK.

AN APOLOGY

We regret having published a letter last month signed by Mr. John Marsden in which a comparison was made between the respective merits of two of our contemporary journals. We must apologize to the Editor of *Cage Birds* for allowing reflections to be cast upon his paper, which we have found quite unfounded, and we have pleasure in publishing letters to that effect from our Members.

EDITOR.

COMMENTS ON MR. MARSDEN'S LETTER

MADAM,—I have read in your current issue the letter signed John W. Marsden, and I cannot refrain from expressing my regret that so ill-advised an attack on the editor of that famous little weekly, *Cage Birds*, should have found space in a publication so widely read and of so far-reaching influence as the AVICULTURAL MAGAZINE.

In my early days as an ardent aviculturist, I sought and received advice from *Cage Birds* which has been the basis of whatever success I may subsequently have achieved, and I have no doubt that many others are in a position to offer a similar tribute. That the advice was free from the recommendation of the products of particular producers did not minimize its value; on the contrary, it gave me confidence in its genuineness and solidarity.

Your correspondent ignores, possibly quite unintentionally, the business point of view. I doubt whether any independent journal concerned in aviculture or in any other hobby or business would enhance its popularity or usefulness by boosting the wares of specific manufacturers. Advertisements are an essential adjunct in the support of a journal, but they must speak for themselves. Editorial suggestion and advice must concern the product; to boost or accept for publication criticisms on particular sources of supply would surely result in the antagonism of numbers of advertisers to the detriment of the journal, as a book of reference for its contributors, and, internally, as a business proposition.

In view of the attitude he assumes, is not Mr. Marsden's appeal for "fair play to all" somewhat incongruously inept?

F. E. THOMAS.

MADAM,—A letter in last month's Magazine, signed by John Marsden, calls for comment, and I do not think that such statements should pass unchallenged. Personally I have no financial interest whatever in *Cage Birds*, although I am an admirer of this splendid weekly bird paper; but when I see in cold print such allegations as Mr. Marsden makes, then I feel that such uncalled-for and undesirable remarks should be resented by every reader of the AVICULTURAL MAGAZINE. I have always found that the editor of *Cage Birds* never refuses to publish any fair criticisms provided he has the necessary space. One constantly reads of such criticisms of the various writers, and I may be allowed to mention an incident which would serve to prove that the Editor gives preference to letters that disagree with his writers. Recently Mr. F. E. Thomas wrote a letter to *Cage Birds* and in very plain words refused to accept a statement I had made in an article I had written for *Cage Birds*. I am not suggesting that Mr. Thomas wrote in an unpleasant manner, far from it, but please note that when I wrote my reply and endeavoured to explain why I had made this statement, the Editor did not publish this letter. I felt slightly peeved, and asked him for a reason and I was very graciously informed that the correspondence column was filled for that week. I accepted this explanation in a sporting manner, and that was the end of it. It is more than possible that in Mr. Marsden's case a similar explanation would have been forthcoming, and it is grossly unfair and unsportsmanlike of him to impute unfair treatment. I am informed on good authority that the Editor of *Cage Birds* receives weekly many letters

which he cannot possibly include for lack of space. Finally, I consider it most regrettable that Mr. Marsden should have aired his views in this manner in such a reputable Magazine as ours, and he should at least have discovered the reason for his letter being excluded before rushing into print.

P. J. LAMBERT.

EXPLANATION

MADAM,—The trader who deals in nest boxes would like to reply to the letter that appeared in a recent issue. I am as much a private breeder of Budgerigars as Mr. Marsden is, and I must protest against the ungentlemanly sarcasm of the term "dealer in nest boxes". May I say that these nest boxes were originally intended for my own use. Other breeders liked and wanted them. By their sale I was able to ensure a humble living for an otherwise unemployable invalid, who undertook the work of constructing them, and it is a pity Mr. Marsden forces me to disclose a small work of charity.

E. COOPER.

COMMENT ON DR. AMSLER'S ARTICLE

MADAM,—I thoroughly enjoyed reading Dr. Amsler's article in last month's Magazine, perhaps his experience in rearing Pheasant chicks made a special appeal to me. Up to date it cannot be said that he has had even a modicum of good luck, but his turn will come. He refers to broods of chicks "gradually" getting smaller and smaller, and blames rats and stoats for this, I think the use of this adverb conclusively points to rats, a stoat would, I think, make short work of the chicks and the process would be anything but gradual. I do not think the Elliot's chick will wander far if one provides plenty of cover, they will hunt for insects, but I have found that they will not go far if the insect food is to be obtained near at hand. If this is not available, then no Pheasant chick is so persistent in travelling in search of insects. I cannot agree that Peacock Pheasant chicks are delicate in their early stages. I quite honestly state that I have found that these chicks are easier to rear than any other species if we except the Silver and possibly the Reeve's. Dr. Amsler suggests that high perches will provide safety for the hens if the male bird has his flying powers reduced by clipping the feathers of one wing (he is presuming of course that the male bird is a bully). That is correct and a good idea, but if the upper mandible is filed down to the "quick", then the male bird cannot seriously damage the hens.

Personally, I never turn the eggs, and have found that by placing them in an upright position with the larger end uppermost, this will suffice to preserve the germ from damage. I have kept eggs in this manner for a fortnight, and the results have been very pleasing. Dr. Amsler's remark about dusting the broody with powder is splendid, and of far greater importance than many phasianists imagine; a chick which is harbouring numberless insects cannot possibly thrive. I am convinced that the Kestrel hawk will take Pheasant chicks. I have heard it said that only an occasional rogue will do so, but do not believe it. Dr. Amsler is quite right. I cannot, however, agree with his "kind" remarks about the Sparrow Hawk. I had

the following experience. I was missing chicks, and in order to discover the miscreant I hid behind a bush. Soon after a hen Sparrow Hawk paid her visit, and I went for my gun (yes, I should have had it before !) about two hours afterwards she came again, but from a different angle, and she carried away another chick before I could shoot. That Hawk paid three more visits that day, but the third was her last, as I then got in my shot. I was told that if one shot the hen the male bird would let the young starve rather than seek food, and this statement appeared to be correct. Dr. Amsler's advice about "cottoning" the rearing ground is sound, but it would take me a month to do this.

I can see no reason for anyone assuming a supercilious smile on reading his notes on rearing, such thoroughness is seldom encountered, and I can only hope that he will experience better luck this spring. I hope he will change his opinion about rearing Peacock Pheasant chicks, and if a Sparrow Hawk does pay him a visit, then I sincerely hope he will not rest content until the evening, before taking precautions.

We Pheasant rearers have our troubles, but this surely adds to the zest of our hobby ? If a cricketer was always assured of making a century, would not the game soon bore that man ? I was always rather efficient at making a "duck", but I loved the game. Let us look on Pheasant rearing with a similar outlook, and when good luck comes, then surely we shall reach the sublime heights of our endeavours.

P. J. LAMBERT.

A CORRECTION

MADAM,—In Mr. Alex. Hampe's letter of 5th November, on page 363 of the December issue, *AVICULTURAL MAGAZINE*, Mr. Hampe notes the successful breeding of the Sumatran Bronze-tailed Peacock Pheasant in the Berlin Zoo, and remarks : "So far only Mr. Delacour had success with this species."

Mr. Hampe is in error regarding this last statement, as both Mr. J. W. Steinbeck of Concord, California, and Mr. Leland Smith of Fair Oaks, California, had much success in breeding the Bronze-tailed Sumatrans during the seasons of 1936 and 1937.

The offspring of Mr. Smith's and Mr. Steinbeck's birds have been rather well distributed among phasianists in this country, and since this variety is said to be a very ready breeder, we rather expect that another season will see quite a few breeders successful in breeding the Sumatrans.

Thus far the more attractive Malayan Bronze-tails have not been brought to America, but if one can believe a statement from a collector now in the field, in a letter I have recently received, they may come in this coming spring.

Both Mr. Steinbeck and Mr. Smith are members of our Ornamental Pheasant Society.

C. L. SIBLEY,
Secretary of O.P.S. of America.

SANDHILL CRANES

MADAM,—Referring to our correspondence of some time since regarding Sandhill Cranes, Mr. Lee S. Crandall of the New York Zoological Park, Curator of Birds, tells me that a few years ago eggs were produced by the Sandhills at the Park, but no young were hatched.

Cranes have not been widely kept in this country, or perhaps, I should say not so generally as in Europe. About the only species of which I have any record as to breeding in this country are Demoiselles, White-necked (in California), Lilfords, Asiatic White, and the record made by Mr. Wm. J. Mackensen, of Yardley, Penna., some years ago in rearing to maturity a young Stanley's Crane. Unfortunately the breeding female was subsequently lost through an attack of diphtheria so the experience was not repeated.

We have here a pair of Sandhills which are very well mated, and which should in time nest. One interesting thing I have observed about the Sandhills is that the brown juvenile plumage is partially carried over into the third year and some birds are nearly three years of age before they finally assume the lovely grey adult plumage in its entirety.

The Sandhills are so happy and frolicsome by nature that it will be a real achievement when a good stock of captive-bred birds is finally started.

The custom of your Avicultural Society in giving recognition of the first breeding of the various species is unexcelled as it gives a definite record of the first breeding of rare sorts. I have only gotten information about the Sandhill and other Cranes through much correspondence and research, which would have been obviated had our American Avicultural so long a record of first breedings.

C. L. SIBLEY.

[It is claimed that Sandhills have been reared at Lilford and it is hoped to publish particulars of the breeding of this and other species of Cranes before very long.—EDITOR.]

THE ASSOCIATION OF BIRD WATCHERS AND WARDENS

(Founded October, 1936)

MADAM,—At a General Meeting of our Association on 25th November three schemes were brought forward:—

- (1) A scheme of nest adoption.
- (2) An inquiry into the possibility of Starlings spreading foot-and-mouth disease.
- (3) A widespread inquiry into the food of our birds of prey.

A number of our birds of prey are faced with the risk of extermination owing to their nests being robbed every year by egg-collectors and to a certain extent by the birds being shot by gamekeepers and others.

First of all we shall approach the owners of estates and the lessees of shoots and ask their permission for making an arrangement with their gamekeepers for the protection of these birds. There should be no difficulty about this as the birds that we have in mind are so rare that the harm they do to game is infinitesimal. The gamekeepers would be asked to protect these nests, and they would receive a certain sum of money when the young left safely. We would arrange for one of our members to visit each nest at the

vital time and to report progress. Members of the public who wish to adopt a nest could choose the species which they most wished to protect and arrangements could be made for them to visit the nest just before the young were ready to fly. If any of your readers are interested in this scheme will they please communicate with Mr. Robert Blockey, of the Educational Museum, Haslemere, Surrey?

Rightly or wrongly birds have been blamed for the introduction of foot-and-mouth disease into this country. If birds are responsible, Starlings, from their habit of associating with sheep and cattle, are undoubtedly the culprits. We are anxious to settle this point as soon as possible, as otherwise we fear that there may be an indiscriminate destruction of our immigrant birds, including Fieldfares, Redwings, etc. We have suggested to those engaged in investigating foot-and-mouth disease experiments which will decide whether it is possible for Starlings to spread this disease.

By collecting pellets, thrown up by birds of prey, from all parts of the country and having them analysed, we hope to prove that the majority of these birds are more beneficial than harmful to game preservers. To make the test a fair one these pellets would have to be collected in the breeding season, say from March to July.

N. TRACY, M.B.O.U.,
Hon. Secretary.

INTERNATIONAL ORNITHOLOGICAL CONGRESS

Monsieur Jean Delacour, secretary of the IX International Ornithological Congress, announces that preparations are being actively made, and that the Congress will be well attended. Members are requested to call at the registration office, Hotel des Sociétés Savantes, rue St. Lô, Rouen, on the afternoon of Sunday, 8th May, or the morning of Monday, 9th May, where they may pay their registration fees and will receive their badges, invitations, programmes, etc.

All arrangements for travel, hotel reservations, and excursions are in the hands of Messrs. Wagons Lits/Cooks and very great reductions on all rates have been obtained for members of the Congress. From London to Rouen, Paris the Carmargue and return, the inclusive cost will amount to about £15 to £22 per person according to class of travel and hotel. Members are advised to communicate with Messrs. Thomas Cook, Berkeley Street, London, W. 1, giving as reference P.O.D. 8449/NS.

Monsieur Delacour particularly requests that all intending to become members of the Congress shall send their names to him at Château de Clères, Clères, Seine Inférieure, France, as soon as possible, as this will greatly facilitate the organization of the Congress.

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THE AVICULTURAL MAGAZINE



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THE AVICULTURAL SOCIETY

FOUNDED 1894

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The Subscription to the Avicultural Society is £1 per annum, due on the 1st of January in each year, and is payable in advance. The entrance fee is 10/-. The *Avicultural Magazine* is sent free to members monthly. Members joining at any time during the year are entitled to the back numbers for the current year, on the payment of entrance fee and subscription.

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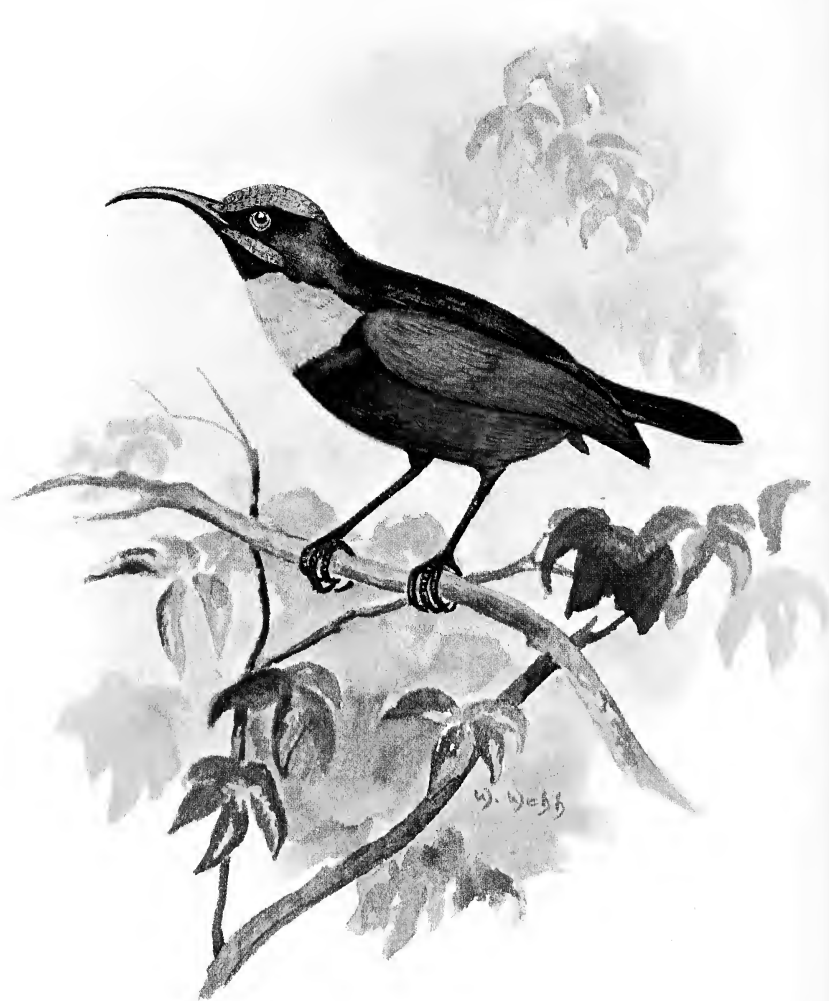
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THE JOURNAL OF THE
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APRIL, 1938.

THE BUFF-THROATED SUNBIRD

(*Chalcomitra adelberti*)

By C. S. WEBB

The Buff-throated Sunbird (*Chalcomitra adelberti*) is easily distinguished from other Sunbirds by its somewhat unusual markings, the underside being chestnut and the throat buff bordered by black, and the chin black. The forehead is metallic green.

This species has a somewhat limited range being found only in the forests of West Africa from Liberia to Nigeria.

The subject of the accompanying plate was caught in the Ashanti district of the Gold Coast. In company with Superb Sunbirds (*Cinnyris superbus*), Olive-bellied Sunbirds (*C. chloropygius*), Olive Sunbirds (*Cyanomitra verticalis*), and two or three species of *Anthreptes*, as well as numbers of Bulbuls (*Pycnonotus barbatus*), Buff-throated Sunbirds congregate in the tall bombax trees, gaining sustenance from the large scarlet flowers, which are such an irresistible attraction to all nectar-feeding birds. During the months of January and February—the period of efflorescence of the bombax trees in Ashanti—Buff-throated Sunbirds could be seen frequently, but in March they seemed to disappear completely, whereas most of the other Sunbirds remained to feed on the flowers of bananas and paw-paws, etc. It is quite likely that the former migrated to another district where the bombax were flowering later.

Like most species of the genus *Chalcomitra*, it does not become so confidently tame as some of the *Anthreptes* or *Cinnyris*, but its striking and unusual coloration and graceful movements combine to make it one of the most desirable of the nectarinidæ.

Owing to their feeding habits, Buff-throated Sunbirds are exceedingly difficult to capture alive. Bombax trees grow to a great height and the lower half of the trunk is branchless, and so climbing them in the humid enervating heat of the Gold Coast forest is an arduous proceeding. The crevices in the bark harbour colonies of vicious black ants which emerge in thousands as one labours up the tree, and if one can survive this onslaught and reach the branches it is to discover that the fun has only just commenced, for here large red ants that make their nests among the leaves advance from all directions "with intent to do bodily harm".

Both these varieties will fight an intruder like maddened warriors and swarm over him in incredible numbers inflicting painful bites. Added to this, swarms of small flies, resembling minute bees in shape, are attracted to one's eyes for the moisture, and hover in front of them with an annoying zigzag flight.

The upper trunk and branches of bombax trees are studded with protuberances with sharp thorny tips so that it is almost impossible to climb them without getting one's arms badly torn.

BREEDING OF WHITE'S WARBLING FINCH

By ALLEN SILVER

During the late autumn of 1936 I received from a Continental dealer eight small birds which were offered erroneously.

Although they were not the birds I expected to receive, they belonged to a group which previously I had not seen alive.

Upon investigation, they proved to be Warbling Finches of three species, viz. *Poospiza whitei*, *ornata*, and *torquata*. The Ringed Warbling Finches were dying from malnutrition and were too far gone to resuscitate, and the others were not happy on a seed diet, so

I supplied insectile food and meal-worms and mixed canary and grass seeds together for them and placed them in a roomy cage. Soon they recovered and became pugnacious so that I had to keep male and female White's Finch apart and the others, which were two pairs of Pretty Warbling Finches, caged in pairs. They moulted in the winter, and by the spring were all in perfect feather; sprightly active birds, almost noteless, and eating little or no seed when soft or living food was present.

About the end of April I placed them in aviaries, but found them anything but amicable, so allocated one aviary to the White's Finches and allowed the Pretty Finches to live with a pair of Greenfinches in another.

During May the male White's Finch started "carting" hay and lodged a nest on some fir needles in a very insecure position. Two eggs were laid, the hen sitting close; but, as I expected, the nest was dislodged, eggs broken, and their first attempt at rearing a family came to naught.

I made a hay nest, placed it in an open fronted box, and shortly afterwards the male adopted the provision and my maid informed me the hen was sitting steadily. Other matters claimed my attention, and the care of the birds was left to her. She reported an egg-shell and was instructed to keep meal-worms present all the time, and a friend kept me fairly well supplied with large wood ants and their cocoons. Meal-worms in a white condition and their pupæ were used more than the ant cocoons. Both fed the young bird, the other egg being clear. Apparently incubation lasted twelve to fourteen days and the young bird was several days old when seen about 1st or 2nd July. When it left the nest it was discovered at the end of the place near the door, but flew back under cover and did not "flounder" about; soon taking advantage of a ledge and a peastick placed on the ground. After two days it was seldom visible, hiding behind some pine branches most of the time. A satisfactory report of its well-being was given to me morning and night as I had no time to investigate for myself. When trying to show it to a visitor I found two more young hatched which were reared and flew and although their tails were half-grown were still entirely dependent on their parents. They thrived apace whilst

I was away, but on reaching home after a journey to my regret I found two more young hatched and predicted trouble. The parents as expected switched off their attentions to the latest arrivals, and a drop in the temperature to almost a frost killed the two very fine young birds which were unable to feed themselves. They proved to be male and female and were sent to South Kensington.

The surviving bird, a female, is now in adult plumage as I write on 7th October, and I have had to discourage further nesting on the part of the parents. The nestlings are streaked on the chest, a character absent in the adult birds of both sexes. A brief description comprises the following particulars :—Above from bill to rump, dark blackish brown. Tail black, with three outer feathers white at the tips, extending down the feather farthest on the outer retrices. Wings like the back. Throat dirty whitish, flanks drab brown. Chest drab brown, but with broad smoky streaks. Abdomen and middle of belly dirty white. Bill black, lower mandible lighter beneath. Legs light leaden brown. Eyebrow streak dirty white, narrower, and not so conspicuous as in the adults.

The old male is a handsome plain coloured bird, the broad white eyebrow and chestnut ear-coverts contrasting with the dark slaty grey upper parts, and the maroon underparts are conspicuous against the pure white of the breast and abdomen. The female differs from the male in being duller, paler, and generally browner. See *B.M.C.*, Vol. XII, p. 641.

The nest was a deep cup, very like that of a Whitethroat, and when removed after being used three times was quite clean. The old birds always removed excreta and flew as far as possible from the nest to drop it. On four occasions *two eggs only* were laid. Whether this is a characteristic of the species I do not know. The male bird sang from time to time a "chipping" song with a little twist at the end, and when a Shamah lived temporarily next door tilted its tail and was quite ready to do battle with him.

The Pretty Warbling Finches became unfriendly with the Greenfinches (which reared two young) and were removed to another enclosure. The male fed the female with living food, she fluttering her wings like a nestling, but she rapidly developed what I believed to

be Aspergillosis and succumbed in the fashion such birds always do. The range of *Poospiza* includes Brazil, Peru, Bolivia to Mendoza, N. Patagonia and other parts of South America. There are about fourteen species, and White's is most like *P. cæsar*, but much smaller. Another little South American bird appeared on the market this autumn, *Lophospingus pusillus*, the Black-crested Finch, two of which I obtained.

THE SUCCESSFUL BREEDING OF THE HAMMERHEAD AND THE BOAT-BILLED NIGHT HERON IN THE BERLIN ZOO

By Dr. GEORG STEINBACHER, Zoologischer Garten, Berlin.

In the year 1937 two interesting relatives of our Herons and Storks, the Hammerheads and the Boat-billed Night Herons, hatched in the Berlin Zoo. Both of them are kept in large flying cages. The Boat-billed Night Herons, of which there are four, have been here since the beginning of the year 1934. In 1936 they had already tried to build nests. One pair then had two eggs, which, however, were not laid in a nest but on the floor of the cage, where they rolled about and were broken.

In 1937 both pairs built nests about two metres high, close below the wire ceiling of the cage. On the 25th June one pair had two eggs and began sitting on them. Strange to say, this particular pair was not in full adult plumage.

On the 20th July we noticed two young ones. The elder of them seemed to be about four days old. Thus the Hammerheads seem to sit for a bit longer than three weeks, about as long a time as the Night Herons. On the very first day we saw the young ones, they begged with a distinctly audible cry similar to that of a Heron.

On the 6th August both of them already stood on the nest. When I entered the cage and approached them, they snapped at me and also uttered a cry of defiance. At first the young ones were continually watched by a parent, which brooded them. When somebody entered the cage, the other parent also joined it to defend the nest. The bird,

which at that moment covered the young ones, adopted a characteristic attitude of defence, spreading its wings and lowering its body. It erected the elongated feathers of its occiput and snapped at the intruder.

At five weeks old the young ones for the first time left the nest. At first they climbed about on the branches near it, then they fluttered from branch to branch and at last went on the soil of the cage. The juvenile dress is similar to that of the two and three years old Boat-billed Night Herons. Back, wings, and tail are brown, the top of the head black, while elongated feathers of the hind head, neck, and underside are light brown. The bill of the young ones from the first day is broadened in a way characteristic of this species.

Extremely remarkable with these birds is their being typical night birds. Already their extraordinarily large eyes prove that. They only become lively in the evening. Then they like to wade about in the water seeking for their prey like Herons. Silent during the day, they are very noisy in the evening, especially in the pairing season. When they are displaying one of the birds runs towards the other while holding its body in an horizontal attitude, stretching out its neck and erecting the elongated feathers of its occiput, rattling with its bill and cawing aloud. The other bird either takes up the same position, then both run by the side of each other or around each other. Or the other bird arises to its full height and caws. As there was no certain way of discerning the sexes, I cannot tell which was the male and which the female.

When the Boat-billed Night Herons came into the Berlin Zoo, they lived almost entirely on horsemeat chopped into narrow strips. Later on they got accustomed to eat fish, on which they now live entirely.

The Hammerheads, too, have been in the Zoological Gardens of Berlin since 1934. In 1936 they built two nests on an artificial base, but which fell down. They were more successful in 1937. At first they erected a nest, which they did not use for breeding, but pulled down again. Then they built a nest of dry sticks on the branch of an artificial tree directly near the trunk. It weighed 64 kilograms when finished. In erecting it, they at first built a base of wet materials and on that a

platform of dry sticks. Then they erected a nest wall around it, which they shut up like a dome. They left open a hole, which they formed like a pipe and used as entrance to the nest. This nest was begun on the 16th May and already contained five eggs on the 19th June. The bird sitting on the eggs continued in building the nest.

Strange to say, the Hammerheads used neither earth nor clay nor similar materials which they use for building their nests in liberty. When one bird was sitting on the eggs, it always began to cry *weer weer* when the other sat down on the top of the nest for building it. On the 16th July I found some young ones in the nest, aged about four days. On the 24th their feathers were already in quills like those of young Herons. These quills later on stuck to the tops of the feathers for quite a long time. One parent at first always stayed with the young ones, later on but rarely. Before the young ones left the nest, the parents only entered it when they wanted to feed them. On the 3rd September, that was at the age of seven to eight weeks, the first young Hammerhead appeared outside the nest for several hours. It only reappeared on the 6th September. On the 7th it was accompanied by a second. From this day onward the young ones stayed outside the nest all day long, but went into it for sleeping. From the first moment the young ones left the nest they were extremely independent. They were very clever at flying. They easily flew into the narrow entrance of the nest. As soon as they left the nest, they no longer were fed by the parents but fed wholly independently. Their feathers were very much like those of the old ones, only a bit smaller. The elongated feathers of the occiput were broader than those of the old ones. They were easily distinguished by their bright yellow eyes, while the eye of the old ones has a dark brown iris. The Hammerheads have not many different cries. The usual call-note is *weer weer*.

A sharp "wit wit" is heard as a sign of fear or anger when a strange bird perches on the nest. The food of the Hammerheads consists of meal-worms and earth-worms, minced heart, minced meat, and soft food, which contains shrimps, raw and crushed meat, boiled rice, and some cut up shrimps and over which some ants' chrysalises are strewn.

WATERFOWL AT WALCOT (BREEDING SEASON, 1937)

By THE CURATOR

Cold weather which continued throughout March and April delayed the nesting operations of most of the early breeding species of Waterfowl; some did not nest at all. Consequently the number and variety of birds reared this season did not come up to expectations.

We propose to say nothing about the commoner varieties which nested but to mention only those which are of greater interest on account of their rarity or reluctance to breed.

For three years we have had in our possession a pair of North American Ruddy Duck. This species belongs to the race of Stiff-tailed, or Spine-tailed Duck, like the Maccoa of South Africa. It is essentially a diving Duck; the feet are large, and the legs set so far back that it can only shuffle about on land. It is rotund in shape and about two-thirds the size of a Tufted Duck.

In full plumage the male has a Cambridge-blue bill. The nape of the head is black and over each eye are brows raised slightly above the crown level of the head, something like those on a toad. The cheeks are white and the general colour of the body is brick red. The tail feathers are long, stiff, and black. Under the tail is a small white patch.

The display of the North American Ruddy Duck is peculiar. Holding the tail erect and slightly spread, the head is bobbed up and down with increasing rapidity. As the speed is increased, the up and down movement is decreased, and finally the bill is pressed into the chest, air is ejected, and this causes water to foam round the bird's breast. The head is then thrust forward and a soft croak uttered. The head movements may be likened to those of a ping-pong ball dropped vertically and allowed to bounce until it comes to rest. This display is repeated many times. A slight disturbance among other birds on the lake or the approach of a dog will cause the bird to perform.

This pair of North American Ruddy Ducks bred here in 1936 and again this year. The nest is always placed near the water's edge. Rushes, or fork of tree roots close to the brink are favourite sites. The Duck

begins her clutch, which averages eight or nine, about the middle of May. She is a determined breeder and will lay as many as four clutches if her former nests are robbed. For so small a bird the eggs are astoundingly large, exceeding those of the Mallard in size. The texture of the shell is rough to the touch. In colour it is very pale green, so pale as to seem almost white. Incubation covers a period of twenty-five days. The ducklings are easy to rear and take readily to biscuit meal and duckweed.

Two years ago we imported a number of Hottentot Teal which were turned out on the lakes. These tiny Duck—perhaps the smallest known species—have proved hardy and easy to keep. They require no artificial warmth or shelter and ice, snow, and east winds have no effect upon them. Two pairs nested this year, at the end of July. In each instance one clutch only was laid. The nests were placed in thick cover which grows on the water's edge. One contained three eggs and the other eight. Incubation took twenty-three days. Fertility was good and the ducklings were easily reared, requiring no special treatment.

Until a few years ago the Versicolor Teal was difficult to procure and the records of its breeding in captivity were very few. Recently a number of pairs have been imported and now they may be seen in most of the larger collections of Waterfowl both in England and on the Continent. It appears from our own experience and from the information we have received concerning this species, that it is quite a free breeder. Two pairs have bred with us this year and the young were reared without difficulty.

Barrow's Golden-eye are not often seen in Waterfowl collections. This is a pity. They are easy to keep and need no special attention. Furthermore, hand-reared specimens are easily obtainable at the present time at a reasonable figure. Though we have not formerly bred this species, Barrow's Golden-eye nested here this season. The nest was placed on the ground inside a hollow willow tree and six eggs were laid. Fertility was good.

We know of no records of Smews having been kept in captivity. We find them the easiest of the Sawbills to maintain in perfect condition. They will find their own food if given a good range; if not, they will thrive on small strips of beef and biscuit meal. Last year, and again

this year, one pair has bred at Walcot. In 1936 the nest was placed under the rotting roots of an old oak. In that year six eggs were laid: all were fertile and five young were reared. This year the nest was placed about 2 feet down a rabbit hole on an island. There were seven eggs in the clutch but they were all infertile.

The Chinese Goose is common enough in a domesticated form but a true wild specimen of this species is a very different bird to look at. We have one pair here, which nested for the first time this year. The nest was built in a reed bed by the side of the lake. Three eggs were laid and all hatched. The goslings are easily reared.

Ross's Snow Geese have bred with us for several years. Formerly we have had one clutch per bird only, this year two Geese produced two clutches each. Like most goslings, Ross's are easy to rear.

In February, 1936, we imported from Holland seven Yellow-billed Bean Geese. They were all wild-caught specimens and had only been in captivity about a fortnight when we received them. In April that year, much to our surprise, we found one sitting. On examining the nest we found it to be one forsaken by a Canadian Goose. The Bean Goose had taken charge of this nest, "downed" it, and commenced to sit. Possibly she had laid elsewhere and her eggs had been taken by vermin.

This year three of these Bean Geese nested. One nest contained ten eggs—these must have been the property of two Geese—the other contained four. Unfortunately none of these eggs hatched.

As a rule wild-caught Geese rarely breed until they have been in captivity ten years or more. These instances are, therefore, worth recording.

Whooper Swans, on account of their size and doubtful tempers, are not commonly kept. We have one pair, which were caught wild six or seven years ago. They nested in April of this year for the first time. Unfortunately the female got out of her enclosure during the incubation period, and as there was some danger of her six eggs becoming chilled before she could be put back these were taken away and placed under hens. Five hatched. Hens are not satisfactory foster-mothers for large cygnets and in consequence all except one contracted pneumonia and died. The bird which was reared is a fine specimen.

BREEDING NOTES FROM NEW ZEALAND AND AUSTRALIA

BREEDING NOTES FROM MR. J. SMITH'S AVIARIES

My aviary tenants are principally of the Australian Parrot family, among which are Cockatoos, Galahs, Kings, Rainbows, Crimson-wings, Stanleys, Red Rumps, Pennants, Hoodeds, Turquoisines, Cockatiels, and, of course, Budgerigars.

Nesting began early in August, but with most pairs did not reach the state of eggs. The first to produce eggs was the Rainbow, which nested in a barrel with no nesting material, and laid on 14th August. The second egg was laid two days later. One young hatched on 6th September, but the other egg failed to hatch. The young one died at ten days, due, in my opinion, to leaving the unhatched egg in the nest. This the parent birds tried to remove, and the breaking of the very stale egg in the nest, covering the young with its contents, was probably the cause of its death, as the parents fed well and the young bird's crop was well-filled when it died. The pair nested again in another barrel, laying on 16th October. Both eggs this time were thin-shelled and failed to stand up to bare nest conditions.

The Galahs had been making nests and tearing them to pieces for weeks, when one pair settled down and laid on 21st August. Three eggs were laid on alternate days. One was broken in the nest, one young hatched on 16th September, and one on 20th September. This last was a weakling, which I destroyed. The other chick did well, and left the nest on 7th November—a strong bird, but here I nearly lost it, as the parents immediately started rebuilding, and neglected to feed it. It was practically starved in three days, so I took it away and hand-reared it. It is now a spoilt pet of the house. This pair nested again on two eggs in the same nest box, both eggs hatching on 17th December and the birds doing well. Another pair of Galahs produced four eggs—all infertile. Another pair nested and laid on 21st September, the second egg on 24th September. They did not sit for several days. One young hatched on 19th October and the other on 20th October. Both were strong chicks and did well, the first leaving the nest on 6th December, the other two days later. They were a

beautiful pair of youngsters, able to fly almost as well as the parents the day they left the nest.

A pair of Crimson Wings nested on the floor of their house early in October, laying one egg and two days later a soft-shelled egg in the flight. The hen died two days later. I gave the cock Crimson Wing a Fiji King hen for a mate. They produced two infertile eggs.

One pair of Cockatiels reared two young from three eggs and are nesting again on four eggs. A second pair laid but did not sit.

A cock Red Rump and hen Indian Plum-head mating produced three infertile eggs.

The Stanleys appeared anxious to nest, as also did a Red Rump and Hooded mating, but I am afraid I was at fault, having other pairs in the same flight.

With regard to nesting places, I do not think the kind of nest would have much influence, my opinion being that, if the birds are in condition and humour for breeding, they will take on almost any kind of nest. The Cockatiels had a box with half a husk in the bottom. The Plum-heads took charge of a large coco-nut husk, the Fiji King and the Rainbow selected a barrel and the Galahs appeared to be the least particular. The first pair nested in a box about two feet deep, with a hole near the top. They chewed through and came out the bottom several times. The last bottom I replaced I shaped in the form of a nest. They then decided to carry all the chips back and make a nest of them. They built up about six inches deep of wood chips and shavings, adding leaves of the gum tree up till the time the young left the nest. Their second nest was the same box, with the old nesting material undisturbed.

Another Galah used a barrel with no nesting material. After several days, to prevent the eggs rolling about, I built up with shavings and gum leaves, and they carried on quite unconcerned. With reference to feeding the Galahs, up to the time of nesting they did well on ordinary parrot mixture. After they started nesting, I gave them a choice of a large selection of various seeds. Of these, they favoured in the following order:—sunflower, whole maize, special white millet, peanuts in the shell, Spanish Canary, wheat, and hemp. In addition, they were supplied with large quantities of seeding grasses and seed heads of

thistle. This latter was consumed in extraordinary quantity. I was rather worried over soft food for them when they were feeding the young, and tried boiled maize, wheat, peas, rice, etc. They would have nothing to do with it, but did use a small quantity of the honey mixture as used for Rainbow Lorries.

It is interesting to note that, before nesting, the Galahs very seldom touched maize, yet it was used in large quantities for feeding the young, only the soft or germ end of the grain being eaten. White millet was well-favoured, but other millets were left untouched. I was puzzled for some time on seeing the birds digging up the earth in their flight, and could not make out for what they were searching. I thought it might be grass roots, and was surprised to see the hen Galah take up an ordinary earth-worm. I then tried them with mealworms, but they would have nothing to do with them. I then kept up their supply of earth-worms from clean, cultivated soil.

I think the young Galahs for the first two weeks are about the ugliest chicks one could see and their nest about the dirtiest, requiring cleaning out almost daily. Possibly the nest condition was due to the large amount of thistle head eaten.

The young birds are slow in feathering, pin feathers appearing on wings and head at fourteen days. The pin feathers break at twenty-two days and develop quickly after this. The eyes start to open at ten days, and are full open at fourteen days. The parent birds did not appear to resent the interference with their nests.

J. SMITH.

SUMMARY OF BREEDING RESULTS IN SOUTH AUSTRALIA

Having read with pleasure some very interesting breed summaries by two or three enthusiastic English fanciers on foreign Finches and Waxbills, I decided to record some of my successes for the breeding season ending 30th June last.

I first opened up my account by breeding the common African Fire Finch (*Lagonostica senegala*). Although these are quite common, I know of many birds easier to breed. These tiny Finches had the nasty habit (at least the cock bird had) of gathering up the offspring

one by one, usually when a few days old, and placing them at the far end of the aviary in a heap where, if not seen in time, the ants would quickly kill them. I believe this procedure is adopted by most Finches and Waxbills from time to time, and that incorrect feeding or interference with their nests is usually the trouble. However, I finally reared two birds which turned out to be hens. These are now about fifteen months old.

The next species I concentrated on was the Scaly Crowned Weaver (*Sporopipes squamifrons*), habitat Africa, sometimes called Moustache Finch. To-day, this bird is more of a rarity, as are most of the South African Finches. The markings on the head are black and grey, resembling scales. It also has a black throat with markings not unlike a drooping moustache, hence this bird's two names. I do not know if this bird has been bred in England, but I should imagine so, as I have found them most prolific. In each case they nested in logs. Their eggs are pale green, heavily speckled with brown. The most remarkable nest I had from this species was of six eggs and six youngsters raised. Altogether, I reared fourteen young, and eventually disposed of the entire family, as I wanted room for new species. They have very little to recommend them as to colour, although they are uncommonly marked. They are very active birds, being extremely noisy and, incidentally, quarrelsome.

The Giant Magpie (*Amauresthes Fringilloides*), habitat Africa, is another variety which have done well for me this year, having bred eight young to date, and the parents still nesting. These also have very little to recommend them as to colour, and they have, of course, no song. Their courting dance is most peculiar. With his elongated neck, the cock bird vibrates his beak in such a manner as to put me in mind of a snake darting his tongue (readers may think my imagination a trifle vivid). A *Fringilloides* lays four white eggs, and I consider them reasonably prolific and extremely hardy. The oldest of my young birds is nearly twelve months.

The White-headed Mannikin (*Munia maja*). This common but attractive little bird is so well known that description is unnecessary. Incidentally, I consider this species one of the hardest to breed. Considering the thousands that are sold, very few indeed are bred. I was

fortunate in inducing a pair I had to breed after having had them eighteen months or so. I believe the greatest difficulty in breeding *Munia maja* is on account of their extreme timidity. I only succeeded in raising one young.

The Painted Finch (*Emblema picta*). I had wonderful results with these until the late summer, having bred thirty birds of this extremely rare species. The majority had moulted out into full colour when some of the younger ones started dying. At first I thought it was due to their moulting, but unfortunately awakened to the true facts too late, when full-coloured birds started dying at an alarming rate. After isolating the birds and doing everything possible in the way of tonics, and keeping the birds in a hospital cage at 80° (incidentally not saving a single sick one) I finished up losing approximately twenty birds. I understand the disease was enteritis. However, these things are sent to try us, and I hope to gain by that experience this year. I have one marvellous pair that have been breeding continuously since last September, excepting for about two or three weeks, when they went into a short moult. It will be twelve months in a week or two since they started. This is no doubt an outstanding performance.

Dufresne's Waxbill (*Coccygia dufresnii*). I succeeded in raising four youngsters of this beautiful little bird some months back and, by the look of things, I do not think it will be long before they will be building again.

I was fortunate in securing our South Australian Society's breeders' medal for all the above species bred this year, so on the whole I am very satisfied with the season's results, and only hope the coming one will be as good.

I have tried time and again with the Melba Finch (*Pytelia melba*), but in vain. One pair have had seven nests, and in the majority of cases the young die in the shell. I have always encouraged them to build under cover and this may have been the trouble, as they may not have obtained enough moisture. On one occasion, in a different aviary, they nested outside in a bush and raised one young to a fortnight old, but unfortunately threw it out. I have now turned this pair into a garden aviary, where they have nested again, so I hope for better results this time.

I have a few nice specimens of the beautiful Fire-tail Finch (*Zoena-ginthus bellus*), which I have had for some months. These birds usually start breeding from September onwards. I recently received a few nice birds, including Peters Spotted Finches, Black-throated Cardinals, Red-faced Waxbills (*Pytelia afra*), Pileated, Nonpareil, and Indigo Buntings, etc., so will have some new species to concentrate on this coming season.

H. S. SEWELL.

BREEDING OF THE DUFRESNE WAXBILL

Having successfully bred the Dufresne Waxbill (*Coccyptia dufresnii*), habitat South Africa, just recently, I will give a few notes on this species which I trust will be of interest.

Securing two pairs of these delightful little Waxbills a little over twelve months ago, I released them in a selected breeding aviary, where one pair soon started to build. These were my rarest Waxbills at that time, and I might say my optimism ran riot. However, my hopes were soon settled when it turned out to be only a sleeping nest, as did several others which they built at different times last season. They proved to be energetic nest builders, but that was all. I had the misfortune of losing one of the hens, so this left me with only one true pair. It was about this time, I believe, that restrictions on South African birds were enforced, so I was unable to procure any more.

During the breeding season this year, I erected a new breeding aviary, and in one compartment established a nice swath of grass. In this house I placed the Dufresnes together with some Fire Finches. I had not long to wait before the Little Waxbills were building. They selected a small nest box high up in their sleeping quarters and all went well until their approximate hatching date. This was in the latter part of February, when a good old Australian heat-wave set in, the mercury soaring up to somewhere in the vicinity of 107° in the shade. Knowing that something was wrong at this stage, I inspected the nest and found one chick just hatched, dead, and three eggs in which the young were dead. Although disappointing, this was not surprising under the circumstances.

In a little over a week, the cock started building again, choosing the same nesting site. A strong, oval-shaped nest was constructed and lined with feathers. The first of four pure white eggs was laid on 17th March, the hatching period occupying fourteen days. Twenty-two days later, when feeding up, I apparently disturbed the clutch, as four young birds flew from the nest—if I said fell from the nest it would be nearer the mark. Apparently they left home two days too soon. I think their parents held the same view, as they literally flew around me like a pack of mosquitoes. It was most interesting to watch the old birds enticing their youngsters back to their elevated nest. On the opposite wall were a few gum branches and extending from the top of these, a perch reaching to their nest. Using the branches as a ladder, they gradually coaxed their family up a few inches at a time and eventually got them home. Two or three days later the young birds were quite strong on the wing. The colouring of the young Dufresnes is similar to an adult hen, head and nape leaden grey, eyes brownish black, beak all black but with the lower mandible changing to crimson approximately four weeks after leaving the nest. Two phosphorescent spots are on each side at the base of the beak, the back and wing coverts olive-green, primaries and secondaries grey edged with green, and the upper tail coverts green tinged with red. The rump is red, the tail black, the throat, breast, and underparts very light grey and the legs greyish-black.

Inside of twelve days the young were independent, and the cock bird in that time had built again. Incidentally, this nest was spoilt by the young birds, who constantly disturbed the hen whilst sitting. At that time I was dubious about separating the youngsters, not knowing they were independent.

The food supply consisted of seeding grasses, soaked seed, and a little live food, together with the usual dry seeds.

I think the Dufresnes must be the most affectionate of the Wax-bills, especially the cock bird, who has the untiring habit of preening the head and nape feathers of his lawful spouse, until she becomes practically featherless on those regions, presenting a most comical appearance. With my previous pair, although they had a large flight aviary, the hen was soon in the same condition.

I believe this specie was bred for the first time in England or Europe some few months ago ; it is therefore mainly my idea in recording the above achievement to show that members over this side of the world are also actively engaged in breeding the rarest Waxbills.

H. S. SEWELL.

AVICULTURAL FAILURES

Too often, only successes are mentioned in the Magazine, and we draw a discreet veil of silence over our failures. As much profit, however, can be derived from failures as from successes. If you do not make mistakes, you will not learn. The crime is in making the same mistake twice.

BOURKES PARAKEETS.—This year, none were actually reared to maturity, several nests, from memory two, of youngsters being produced two and three at a time, but they all very poorly. They left the nest in most cases, but did not attain that degree of vigour that one would expect. Information gathered elsewhere, however, indicates that the slight degree of relationship that there was between the parent birds was probably the real reason for the weakness of the young. Any suspicion of inbreeding with Bourkes Parakeets seems to sentence the young ones to an early death.

BLACK-CRESTED SIBIA.—These are rich, chestnut-coloured birds, with black heads and long, black crests, about half as big again as a Shama. They are natives of India. A pair were brought back in 1935, and liberated in a small aviary all to themselves. In the summer of 1936, a nest very similar to that of a thrush was built in a small-leaf privet tree. Two eggs of a pale green shade with on them a few brown spots were laid. Then—tragedy. The hen bird was found dead, in perfect condition and with no sign of attack from cats or outside vermin, and I was keenly disappointed, so much so that I did not conduct a *post mortem*. To have been so near and yet so far, to have selected these birds in London, to have transported them, acclimatized them, to have got them to go to nest—and with this result ! There is only one thing for it—try again.

ROYAL STARLINGS.—A case of interference with Nature. In 1935 they wanted to go to nest in the very early spring, when we were still getting exceptionally cold mornings. Having some fears of the possibility of egg binding, I withheld the white feathers, which they prefer for a nest. The weather improved after a few weeks, and the birds then ignored the nesting material provided and went into a partial moult and, during the whole of that spring and summer, made no serious attempt at nest building, let alone at breeding. In 1936, I let them have their own way and, when the hen in the springtime started carrying a little nesting material, she was immediately given her white fowl feathers. She went to nest and reared a splendid young one which is now flying round the aviary. It is, I believe, a cock bird.

MEXICAN BLUE JAY.—Nature apparently determines that the hen birds should lay eggs, but she was determined that, in spite of eggs being laid, she did not approve of any of the nesting material provided, nor was she prepared to use the nesting site in the aviary. A 56-lb. butter box did not appeal in the slightest, nor did a heap of twigs laid all ready on top of the box. The hen persistently sat on the seed tray, but refused to lay there and ignored some twigs that were provided to induce her to nest even in that unsatisfactory position. Ultimately, the cock bird was loaned to another aviculturist who had a hen bird only who had selected a nesting site, but what the ultimate result was, I do not know.

G. ROWLAND HUTCHINSON.

WADERS

By RICHARD JAMES

It has always been a source of wonderment to myself that so little should be written about the Wader. W. H. Workman's article in the March issue of the Magazine has tempted me to dilate somewhat on the subject, while the last paragraph inspires me to make an offer. In general, the Wader is a most admirable aviary bird. Their feeding is simple, they quickly take to aviary life, are peaceful with each other, and can be kept with a collection of British Finches and Foreign Waxbills. The action or movement of the Plover family would charm

a person who was indifferent to birds. Each species has its own individuality. The Ruff is playful and the Oyster Catcher is the clown. A pair I have will dig for worms, and seem to laugh each time one is found. If worms are supplied by one of us, the Oyster Catcher will run to the pond with each one separately, and thoroughly wash the worms before eating them; they seem to think the worms they find for themselves do not need washing. It is entertaining to see the Oyster Catchers extract a snail from its shell, and then break the shell, so nothing may be wasted. They are also fond of the periwinkle, supplied by the fishmonger: these they extract from the shell—they do not use a pin either—and nothing is wasted.

I have a pair of Ruffs and one Oyster Catcher to spare, imported, ideal aviary birds, moulted in captivity. I will be pleased to give them to a member of the Avicultural Society, if applicant can offer suitable accommodation with regard to space and pond. Please apply by letter. I find it most difficult to get complete data with regard to Waders, unless such birds can be obtained in captivity.

I hope to hand the gift birds to an applicant in the vicinity of Kent, to ensure comfortable transit. I can recommend the family of Waders to any interested fancier or student who can comfortably accommodate them.

All the Waders are unique aviary birds, they are interesting and decorative. The latter remark applies especially to the Ring Plover and the Dotterel.

Thus, my small effort to help popularize the Waders.

346 Eden Park Avenue,
Beckenham, Kent.

LONDON ZOO NOTES

By N. WHARTON-TIGAR

In attempting to write this month on some of the waterfowl at the London Zoo, I feel very much out of my depth, my knowledge of these birds being very elementary. I quickly enlisted the help of my young friend Mr. Terry Jones, an enthusiast on the subject. On a very cold day, with a biting wind, we met at the Zoo and carefully

examined each species. I made notes with my numbed fingers, which I am now scarcely able to decipher! However, Mr. Jones is very thorough, and wrote me out a list of the whole collection of the three kinds I had decided to write about, namely, Swans, Geese, and Ducks. Besides which, he lent me his copy of Mr. J. C. Laidley's book, *The Care and Propagation of Ornamental Waterfowl*, and, as I see it has a preface by Mr. Seth-Smith, I feel every confidence in quoting from it.

To begin with the Swans—the handsome Black Swan (*Chenopsis atrata*) from Australia, with its red bill and the inner feathers of the wings curled and raised. The Black-necked *Cygnus melanocoryphus*, a native of South America, has a neck which is blackish-brown, the bill is bluish-grey, and a large red wattle, the body is white. Both these species are not too good-tempered, and will occasionally kill young Duck. The Zoo have also one Whooper Swan (*Cygnus cygnus*), and one Bewick (*Cygnus bewicki*), the former breed mainly in the Arctic Circle and sparingly in Scotland, and the latter in Arctic Eastern Europe. I should have taken the two for a pair, but the difference in the bill was pointed out to me, and Mr. Seth-Smith told me how the Zoo came to acquire the Bewick. He was watching some Swans on a lake in Surrey, when he noticed among them a young Bewick, still in immature plumage. This was interesting, as they are seldom found as far south, and he asked the keeper to try and catch it. This was done, and Mr. Seth-Smith brought it to the Gardens.

I think the three species of Geese are all interesting. First, the Red-breasted, recently acquired from Moscow, is an exceedingly beautifully coloured bird, black, white, and rich chestnut—a true Goose, bill very short, and cobby in shape. Mr. Peter Scott, well known as an artist, has gone to the northern shores of the Caspian Sea, where the species winters, to bring home, if possible, live specimens of this lovely Goose. The Red-breasted has seldom nested in captivity, though some wild caught birds did so fifteen years after their arrival at Woburn Abbey. It has been found in ancient Egyptian paintings. The Semi-palmated Goose (*Anseranas semipalmata*) is a handsome bird, if a little ungainly. It is a native of Australia, and has orange legs and feet, a Duck-like bill; the body is black and white. The bird perches a good deal, and does not look very much like a Goose.

The Abyssinian Blue-winged Goose (*Cyanochen cyanopterus*) from north-east Africa, dull dun and buff shades, with slaty-blue shoulders and green speculum. The Zoo have a pair of these. No doubt the fact that they are said to be nocturnal accounts for the curious way they go about, looking very humped and ill at ease; the female is a little smaller and has a different call.

Among the Ducks, the South African Ruddy Shelduck (*Casarca cana*) differs from the Common Shelduck chiefly in having a lavender head and neck, neckband brown instead of black, eyes yellow. The Australian Shelduck, Mr. Laidley describes the Drake of this species "as one of the most handsome of all waterfowl. His head and neck are black, with white collar at base of neck. The breast is yellowish-chestnut, bill, legs, feet, flight feathers, and tail black; the rest of the bird being an iron-grey almost black finely pencilled with white".

The Common Pintail (*Anas acuta*) are found throughout the Northern Hemisphere, but the Bahama Pintail (*Anas bahamensis*) is a native of tropical South America, the West Indies, and the Bahamas. The American Wigeon (*Anas americana*) winters in the United States, and breeds in north-west America. It is distinguished from the common Wigeon by its vinous back and flanks, its head is pale grey with black spots, with a white stripe on the crown and two bronzy-green stripes from the eye to the nape. The Chiloe Wigeon (*Anas sibilatrix*) from South America is hardy and prolific, and, thanks to its amusing habits and pretty plumage all the year round, may be considered one of our most ornamental waterfowl (Mr. Delacour, *Aviculture*, vol. ii).

The Common Pochard (*Nyroca farina*), native of Europe and southwards to India, the Tufted Pochard (*Nyroca fuligula*) from the same regions, and the Red-crested Pochard (*Netta rufina*), this is an easy species to breed, and has the same distribution. The Rosy-billed Pochard (*Metopiana peposaga*) is a native of South America. The Red-billed Duck (*Anas erythrorhyncha*), native of Africa and Madagascar, is rare in confinement.

The Zoo have two varieties of the Tree or Whistling Duck, the Fulvous (*Dendrocygna fulva*), a bird with a very wide distribution, inhabiting parts of the old as well as the new world. The Black-billed

Tree Duck (*D. arborea*) is peculiar to the Antilles. It has been bred by the late Mr. Blaauw and the Zoological Gardens of Cologne.

The Falcated Teal (*Anas falcata*) breeds in East Siberia, and winters in China and Japan. I will give Mr. Delacour's description of this species : "The Falcated Duck is one of the handsomest of the genus. The drake in colour has a crest at the back of his head, and his tertiary flight feathers are very long, slender, and curved in hoops over his back. The colouring is silvery-grey vermiculated with black, tail speculum and hoops are bronzed-green, edged with light grey ; head, neck, and crest are green shot with purple, with a little spot on the forehead ; the chin, throat, and a patch below the neck are pure white." Also the Clucking or Baikal Teal (*A. formosa*), a charming Siberian species which winters in China and Japan.

The Zoo has specimens of the well-known and frequently bred Carolina and Mandarin Ducks, the former, *A. sponsa*, from North America, and the latter, *A. galericulata*, from China, Formosa, and Japan. The Mandarin Drake in full colour is the most lovely and amusing little creature ; the Carolina is almost equally so ; no wonder they are so popular. Mr. Terry Jones tells me that one interesting point about them is that they both nest in trees (in holes) high off the ground. For the first day or so the ducklings of both species are able to jump great heights, and their claws are very sharp to enable them to climb out of hollow trees, from where they jump to the ground. Their extreme lightness and fluffiness enabling them to do so without injury. In captivity they often try and climb out of the coop, and sometimes manage to cling upside down on the roof. Should they get out, they are as difficult to catch as a mouse !

Another very lovely little Duck is Barrow's Golden-eye (*Bucephala clangula islandica*), native of Arctic America, Iceland, and Greenland. The drake has head and neck black glossed with bluish, the head is crested and velvety ; altogether a striking little bird.

Lastly, there is at the Zoo a specimen of the curious and rare Steamer Duck (*Tachyeres cinereus*), Falkland Isles, very interesting, but not exactly a thing of beauty. Mr. Seth-Smith tells me opinions differ about this bird, many maintain there are two races, one which can use its wings in flight, and the other to which the Zoo specimen

belongs, which when in a hurry flaps its wings, using them on the water like paddles, hence its name, Steamer Duck. It is clad in grey, with a laced effect, white round eye, olive-yellow beak, and feet very heavily built. It might be described as the bulldog of the Duck world.

The Zoo collection is quite a good one, but not outstanding ; many members of this Society have collections which are far larger and more varied ; however, far-away readers may like to hear what varieties are at the present time at Regent's Park. They are mostly housed in the large pond which forms part of perhaps the prettiest portion of the Gardens. On the left, coming from the North Entrance, are the Birds of Prey aviaries, with the bedded-out stretch of garden in front of them, very well done indeed, and a blaze of colour all spring, summer, and autumn. The pond is surrounded by large trees, stretches of grass, and beautiful flowering shrubs, and forms a cool and attractive spot in the summer months. The Waterfowl look happy dipping in and out of the water, and the Flamingoes add very much to the picture. Of these I will write some other time.

WHEN MEMORY LAUGHED

By E. M. STORY

The bird of blue—invisible—had fled,
Was due the crimson daw of woe complete,
And Memory sat her down in Mea Culpa seat,
Too sorrow-weighted to lift up her head
Lest she might see aloft the bird of red.
She heard the passage of the unseen wings
And circling round her felt forgotten things
Catching the mingled flash of blue and red.

The sun shone forth from out the cloud of gloom
Touching to brilliance things of darkest hue
Rippling the waters of Nepenthe's stream ;
And Memory watched the flowers aburst to bloom
And caught the blended tints of red and blue
And laughed, as fled her fears, chased by the beam.

The blue bird of happiness—Maeterlinck.
The crimson daw of misery—Cassidy.

MACAWS BRED IN CONFINEMENT

By J. DELACOUR

In Dr. E. Hopkinson's interesting note on Macaws bred in confinement there seems to have been some confusion between the English and Latin names of two species: The Red and Yellow Macaw is *Ara macao*, while the Red and Blue is *Ara chloroptera*. It is, therefore, difficult for the reader of the note to find out which species is really intended in the different records. The species breeding at Lilford is the Red and Yellow (*Ara macao*). Also the records should be completed by the mention of two beautiful hybrids, Blue and Yellow (*A. ararauna*), Red and Blue (*A. macao*), now living in the Catalina Island Bird Park, California, which I mentioned in last year's Magazine (p. 138).

ORNAMENTAL PHEASANT SOCIETY NOTES

The activities of the O.P.S. have naturally advertised the keeping of Ornamental Pheasants in our aviaries, and this has led to one result which is possibly not altogether desirable. In past years one has heard of several dealers in England importing rare Pheasants from India and the Far East, dealers on the Continent have done likewise. This year there has been an unprecedented rush to import Pheasants, quite regardless of being certain to find the birds suitable homes. One wonders how many of the numbers that leave India alive will reach European shores in reasonably good condition. Has sufficient care been taken to ensure the comfort of the birds on the voyage? Were they in a fit condition to travel or were they trapped and shipped before being kept in aviaries for purposes of taming and bringing them back to a good travelling condition? Has the crating been properly attended to? All these matters give rise to serious thought. If Pheasants have been brought into first-class condition before leaving the port of embarkation, fed in a proper manner, and receive expert attention, then there is no reason to suppose that many casualties will result. But are such precautions always taken? Is it not customary for Pheasants, and indeed, other birds, to be packed in inadequately small crates and cages, fed in a haphazard

manner, and with most unsuitable food? There is a magnificent opportunity for our Society, and, I venture to say, the A.S., to insist that all birds that are exported from their native climes should receive expert attention both before embarkation and during the voyage. If it is found that birds are arriving in bad condition owing to unsuitable packing and food, then this should be reported to the proper authorities. It is one of our principal aims to arrange for the propagation of rare Pheasants in our aviaries and therefore it should be our first thought to see that the birds arrive in good condition. I am not suggesting for one moment that importers are aware of the shocking conditions that at times exist. In this matter it should be possible to make it compulsory for importers to take steps to arrange for proper treatment and most certainly no one should be allowed to import any birds without a licence. We hope that sufficient support will be forthcoming to enable us to do something of real benefit to bird fanciers, and therefore we appeal to all bird lovers to join our Society as well as the Avicultural Society.

JEROME LAMBERT.

CORRESPONDENCE

A CORRECTION

MADAM,—I notice one printer's error in my article "Facts and Figures", The sentence, "Only two species did very badly—Rock Grass Parrakeets. all four of which got ill and died at one time or another," should read, "Got ill *or* died." Two of the four birds recovered.

TAVISTOCK.

BARRINGTON HOUSE,
HAYWARDS HEATH, SUSSEX.

MR. L. C. WEBBER'S ARTICLE

MADAM,—I have never found in the whole series of the AVICULTURAL MAGAZINE anything more astonishing than Mr. Leonard C. Webber's article on the Blue-winged Parrot (*Neophema chrysostoma*), page 28 of the January, 1938, issue; and it is still more surprising that the following number did not contain the slightest reference to it from any experienced Parrakeet breeder.

In a very few words we are asked to believe in a most extraordinary technique in Parrakeet breeding.

We are told that delicate Grass Parrakeet eggs *produced a 65 per cent hatching result* after at least seven weeks' delay and probably much shaking and rail trepidation on the long journey from Tasmania to Siberia.

From personal experience in importing Gamebird and Waterfowl eggs from various countries, I may say that any delay over three weeks runs very

close to the limit of germination power, and that such eggs are practically useless when incubation is started after four to six weeks.

Now the eggs of Waterfowl and Gallinaceous birds are comparatively very "delay-proof", as, in nature, incubation often does not begin before the completion of a rather large clutch.

Thick-shelled or oily-shelled eggs (such as those of Guinea-fowl or the Mallards) seem to be more resistant than porous ones, and we may also say that the smaller the size of the egg, the more rapidly it loses its chances of proper germination.

This is, perhaps, largely due to over-evaporation; the ratio "surface-versus-volume" being the simplest geometrical explanation of it.

It is hard to believe that the minute and fragile eggs of Grass Parrakeets would be unusually resistant to staleness and desiccation.

It is then reported that these Parrakeet eggs were placed in an incubator with the above-mentioned success!

We must infer that, from their first day, the young were actually hand-reared—and we are already aware of the skill required to hand-rear a baby Budgerigar or even a larger Parrot.

Using other Parrakeets as foster-parents has, up to now, been generally disappointing; the Budgerigars, especially, seem hopeless for rearing any young Grass Parrakeets, and even the best hen Bourke's is generally useless for any youngster of the "green" Grass Parrakeets.

It would, therefore, have been quite valuable to learn by what method the prosperous stock of Siberian Blue-wings was actually started.

The extraordinary prolificacy of that stock—up to four nests per annum with common clutches of eight!—seems to point to exceptionally skilful management and the favour of a Siberian climate.

In Belgium we are not so happy, and we have to treat our Blue-wings as semi-hardy birds. *En résumé*, Professor Kharkloff's reported achievements are valueless for avicultural or scientific purposes while we have not more complete and detailed information of the technique adopted by him.

His claim to have "fixed eight definite colours" among his stock of *Neophema chrysostoma* in ten years must be substantiated by better references and descriptions before being seriously considered—especially so because we have not yet an authentic record of any established "sport" or mutation in the Grass Parrakeet group.

Possibly the explanation of the whole thing will be found in some letter written in Russian and incorrectly translated by the Tasmanian correspondent of Mr. Webber. I should not like to hurt Mr. Webber's feelings by my apparent scepticism, but, on the other hand, I foresee that, in going over our printed records, the future aviculturists of half a century or so may get some queer ideas from such articles about our avicultural methods of 1938.

I would suggest, also, that correspondents should be asked for fuller information when such bald statements are submitted for publication in our Magazine.

J. M. DERSCHIED, F.Z.S.,

Professor of Biology,

Colonial University of Belgium.

When I acknowledged receipt of Mr. Webber's article I asked him to find out all he could about Professor Kharkloff's wonderful achievement and to report it as fully as possible for publication in the AVICULTURAL MAGAZINE.
—EDITOR.

REVIEW

THE HANDBOOK OF BRITISH BIRDS, Vol. I. By H. F. WITHERBY, F. C. R. JOURDAIN, N. F. TICEHURST, B. W. TUCKER. Published by Messrs. H. and G. Witherby, Ltd. 25s.

It is really not possible to do justice to this monumental work in the space at our disposal. Volume I takes us from Crows to Flycatchers, minutely describing the plumage (male, female, and juvenile), voice, food, breeding display, distribution in the United Kingdom and abroad, habitat, field characters, and general habits, measurements and structure. It also contains thirty-three coloured plates, text-figures, and maps showing the breeding range of certain species in the British Isles and of others in Europe, and results obtained by ringing.

The present handbook is a lineal descendant of "A Handlist of British Birds" much enlarged, and is the result of many requests for a reprint of its immediate predecessor, "The Practical Handbook." It is planned for quick and easy reference, each bird is treated in the same way and the information is divided into sections. The introductory notes and glossary of terms will be found very helpful, also the explanatory figures showing the correct method of measuring the different parts of a bird, and the key to orders and sub-orders.

The coloured plates show the adult and juvenile plumage of both sexes as well in summer as in winter colouring where these differ to a marked degree. As a rule four kinds of birds are portrayed on one plate, this looks rather crowded and the figures of the larger species suffer in appearance.

In every other respect the book deserves all praise; it is concise, authoritative, and worthy of its distinguished compilers. It will be completed in five volumes, and sold to subscribers to the whole set at 21s. the volume, to others at 25s., and at either figure is marvellous value.

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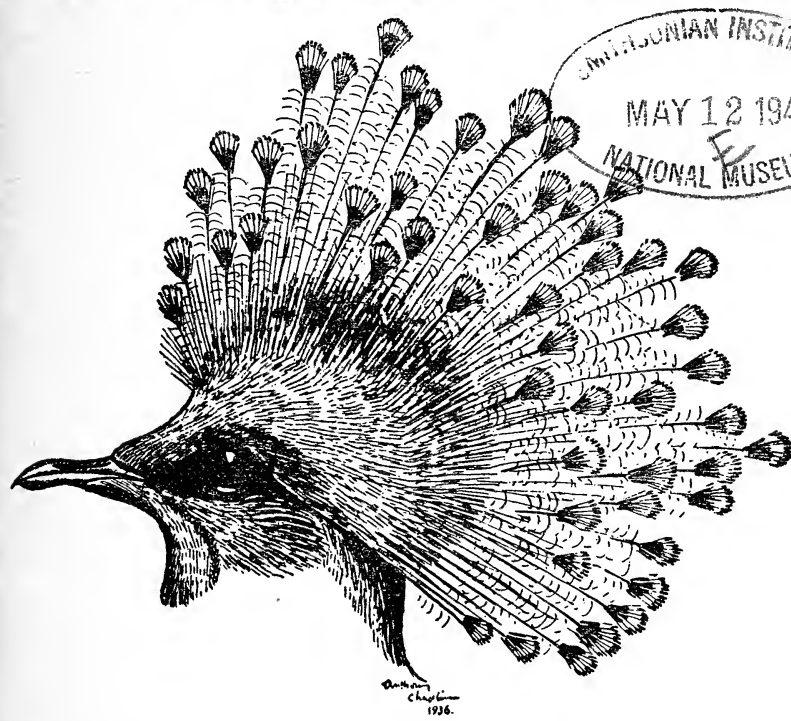
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THE
AVICULTURAL MAGAZINE



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THE AVICULTURAL SOCIETY

FOUNDED 1894

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MAY, 1938.

BERNSTEIN'S GROUND-CUCKOO

(*Centropus bernsteini*)

By P. H. MAXWELL

Among the interesting collection at the London Zoo is a specimen of this rare and peculiar ground Cuckoo from New Guinea.

The following is a description of an adult specimen.

Entirely black, with a strong greenish gloss, and glossy black shafts to the feathers of the top of the head, neck, mantle, and chest. Bill and legs black; iris dirty white. Total length 18·5 inches; culmen, 1·45; ring, 7·5; tail, 10·7; tarsus, 1·75.

The Zoo specimen came from Mannen Volcano, S.E. New Guinea. This bird is distinguished from the Menebiki Ground Cuckoo by its black bill and nearly straightened hind claw. A collector of the B.O.U. and Wolleston Expeditions to Dutch New Guinea remarked on its very skulking habits and it appeared to occur near the coast. It is worthy of mention that John Gould, the well-known naturalist, did not mention these birds in his book on the birds of New Guinea so could not have known of their existence.

A CHAT ABOUT THE TUI OF NEW ZEALAND

By JAMES CASSIDY

When visiting New Zealand the writer had the pleasure of hearing some of the most delightful musical notes that have ever greeted and gladdened the ear.

It was in a beautiful garden in Auckland, when the flax flowers were in bloom that from the summit of the plants the Tuis sang, inimitably. The song was composed of many and various musical notes. One leading expert gives as many as seventy variations. Its voice is at its best in the happy breeding season.

Here is the account that Mr. W. R. B. Oliver, M.Sc., has of the bird, which seems well worth quoting here and now:—"The Tui (*Prothemadera novæzeelandiæ*) is one of the most characteristic birds of the New Zealand forest, not so much of the gloomy interior as the upper lighted portion and the outskirts. Its station is among the tree-tops, where the flowers and fruit are borne. When journeying from place to place it usually flies at a considerable height and descends suddenly to its destination. Its flight is particularly noisy and when darting through the forest, or pursuing one another, Tuis pass, like a flash, and disappear among the trees with a sound that earned for them among sealers the soubriquet of 'Breaksea Devils'. Breaksea being one of the sounds resorted to by sealing gangs."

THE CHARACTER OF THE TUI

There is nothing of timidity or cowardice in the nature of the Tui. It is bold and courageous and rather pugnacious, and in Mr. Oliver's opinion it may be these characteristics that have challenged the Blackbirds and Starlings which have been known to attack the Tuis in company, and the idea certainly seems practical and altogether reasonable.

The Tuis may be said to "meet the winter by avoiding it", inasmuch as they often leave the forest and, flying far, settle in the

more residential districts where they feed on the flowers of introduced trees such as the blue gum and the fuchsia. On Stewart Island the birds leave the middle of the islands and make for the coasts, says Mr. Guthrie-Smith. Here, by the coasts, they breed, in spring.

Some reader may ask "Why have you not yet given us a description of the appearance of the Tui?" The reply to that question must be that it was judged desirable first to interest you in the bird's character and vocal achievements to induce the inquiry as to its appearance and habits.

THE APPEARANCE OF THE TUI

Under the brilliant light of a New Zealand sky on a fine day, the general colour of the adult bird is a shining metallic green with bluish purple reflections on the shoulders, upper tail coverts, and lower breast. The hind neck is ornamented with filamentous plumes curving outwards and with a white line down the centre; back and scapulars are bronzy brown; marginal coverts blackish purple; central coverts with outer portion white, forming a conspicuous wing bar; quills and tail-feathers are black on their inner webs. The abdomen and sides are reddish brown. Two tufts of filamentous curled feathers, white, ornament the throat. The bill and the feet are brownish black. Caught in a favourable light the green, purple, white, and black, enhanced by the several tints of brown may be seen in contiguity, and the whole appearance thus presented is fascinating.

The iris is a dark brown.

The length of the Tui is *approximately* sixteen and a half inches, with seven and a half inches to the wing; one inch to the bill; six and a half inches to the tail and one and a half inches to the tarsus.

When the Tui is immature its prevailing tint is a blackish brown, the median wing coverts are white and the quills and tail feathers of a metallic green.

EGGS

The eggs are very attractive, they are pinkish white with small pink spots and blotches chiefly at the larger end, they are in clutches of four.

“ On what does the Tui feed ? ” do you ask ?

Insects, nectar, and berries. When the berries are over and the winter has yet some time to run insects form the bird's mainstay. As a rule they are prodded out of the trees, but one ornithologist (Waite) noted when at Auckland Islands that the Tuís were taking insects on the wing.

The kinds of berries provided by the New Zealand forests are extremely numerous. Perhaps the best known and the most conspicuous are those of the mahoe, coprosma, supple-jack, maire, mako, and karaka.

The nectar-producing flowers are also in plentiful supply in the lovely forests, and, amongst the favourites of the Tui, may be mentioned as most conspicuous the rata, kowhai, rewarewa, and fuchsia, while scrub and swamp provide enormous quantities of flax flowers (*Phormium*). The soft spikes of the kiekie are also considered edible by the Tui (so Buller).

In these days, when conscience is, perhaps, better awakened, the Tui is protected by law from those who would eat its flesh or export it for its skin, which formerly was used in millinery, many skins being imported by London. The protection by law of this beautiful bird amply repays the favour, as its work, as a destroyer of insects inimicable to plant life, including the blue-gum scale, and by its cross-pollinating of forest trees, has rendered it a valuable practical economist.

THE MAORIS AND TUI

The Tui was domesticated by the Maori, who kept it in cages and taught it to talk and to sing. No other bird was thus taught by the Maoris. It is said that they trimmed the end of its tongue. The Tui being imitative and a competent mimic easily produced all kinds of noises and sounds, including pig-squealing (the Maoris kept many pigs), the whistle of a shepherd for his dogs, and also the calls of many birds. It sneezes, coughs, and gurgles and introduces such notes into its musical songs. It would thus appear to have anticipated modern music vagaries.

“When singing the Tui puffs out its plumage and with throat and beak open and tongue slightly protruding, with much gesticulation, pours out its song,” says Mr. Oliver in his book on New Zealand birds. The skins, after head, wings, and tail had been removed, were dried in a cylindrical form and used by the Maori women as ear-pendants.

THE VELVET SCOTER IN CAPTIVITY

By J. DELACOUR

In the early months of 1932 my friend, M. R. Homberg, sent me two male Velvet Scoters (*Ædemia fusca*) from the sea shore near the Somme estuary. He had been endeavouring for some time to procure for me some of these interesting birds alive, by shooting them slightly in the neck, at long range, with very small shot. Both birds arrived in fairly good condition, but of course with rather stiff necks. One survived only a few months, while the other one gradually improved, and eventually recovered completely. Let out on the lake, the bird soon became very tame and greedy, eating readily soaked dog biscuit, bread, and even grain; meat was never touched, but worms and water insects no doubt somehow supplemented its diet.

Its picture was taken in 1936, after over four years in captivity and the Velvet Scoter looked perfect, till about a year ago, when he began to show signs of old age; the nail of its bill grew too long, and we had to cut it; its general appearance became gradually that of an aged bird. It died early this year.

I have never yet seen another Velvet Scoter in confinement, nor heard of any having been kept in captivity for more than a few weeks. Ours lived at Clères just about six years.

A beautiful male Long-tailed Duck, caught and sent to me by M. Homberg at the same time, and by the same method, is still in perfect condition.

We also have a pair of Australian Sheldrakes (*Casarca*

tadornoïdes), the finest species of the genus, which has also the great virtue of being much less spiteful and pugnacious than its relatives. Unfortunately, this fine Duck does not seem inclined to nest in Europe, and it has not yet been bred in captivity in our part of the world nor in America.

AUSTRALIAN BIRD-BEAUTIES

By JAMES CASSIDY

All Australian birds fall for study into five various species. In each species we find distinct beauties in the several individuals constituting each class.

For the sake of convenience we will just run over the names of the separate genera and the type of birds we may expect to find distinguishing each :—

- | | | |
|------------------|---|---|
| (1) THE RAPTORES | . | Birds of prey. |
| (2) INSESSORES | . | Perching birds. |
| (3) { RASORES | . | Pigeons. |
| { GALLINACEÆ | . | Quails, Partridges, etc. |
| (4) GRALLATORES | . | Plovers, Sandpipers, Ibises, Herons, etc. |
| (5) NATORES. | . | All water birds. |

We shall here give one or two members of each genus some consideration keeping in mind our title.

A fine example of the Raptores species is the Wedge-tailed Eagle (*Aquila audax*). It is of the Falconidæ family and is found all over the southern portion of Australia. It also flourishes in Tasmania and the larger islands of Bass's Straits. John Gould considers this bird and the Golden Eagle "beautiful analogues of each other". In its

slender wedge-shaped tail this lovely bird presents a far more elegant contour than does the Golden Eagle.

Unlike India, Australia has no Vultures for the excellent reason that she has no carcasses of quadrupeds of huge size to clear away. Professor Gould examined and described an example of the Wedge-tailed Eagle, which weighed 9 lb. and measured 6 ft. 8 in. from tip to tip of the opposite pinions. This was not by any means a large-sized specimen ; if anything it may well have been a little under the usual dimensions. The bird soars to a great height and performs the most graceful evolutions and circles in the air. Its acute vision enables it while thus soaring and circling to descry the retreats of its future victims—the smaller species of kangaroo, dotted about the hills and the plains inland. Nor is it content with small animals only. It does not hesitate to swoop down and exert its powerful grasp on a bird twice its own size—the Bustard.

Thirty or forty Eagles have been seen assembled together indulging their appetites by gorging on a dead bullock. The Eagle prefers living prey but as we have shown does not altogether refuse the carcasses of animals which are sometimes in a putrid condition. Its courage, power, and rapacity are remarkable.

Nests.—The bird builds its nest on the highest trees ; none but the aborigines being able to obtain them. The trees selected frequently rise to a height of 100 feet before giving off a single branch. The nests are very large, almost flat, and put together of sticks and small boughs.

Eggs.—The eggs are about 3 inches long by $2\frac{1}{2}$ broad, of stone-colour, with large purple blotches and smaller blotches of “yellowish-umber-brown”. The young birds suggest the colouring of fawn, rusty red, and black.

Stock-owners and the shepherds they employ eagerly shoot the birds whenever possible, to save their sheep and lambs, but in spite of rewards offered the Wedge-tailed Eagle is scarcely likely to be altogether exterminated while the vast and dense Australian forests remain unpenetrated.

The next bird which we shall consider is the remarkable Queen Victoria Lyre-bird, of the Order Insectores.

Order INSESSORES. *Family* MENURIDÆ. *Genus* MENURA.

The Lyre-bird is, possibly, the most appropriate bird as an emblem for Australia of its avifauna.

Its principal habitat is New South Wales and parts of Victoria. The rough close thickets or brush near mountain or coast both afford it shelter. The cedar bushes of the Liverpool Range and the mountains of the Tumat Country are favourite haunts.

The Lyre-bird is very shy and consequently not at all easy to procure. Travellers in the bush can hear the loud liquid calls of these birds for days together and all that time never see a glimpse of one.

The birds choose inaccessible places—steep gullies or ravines, disguised or covered by moss and creepers of great luxuriance and dense trees. The slightest noise, a falling stone, a crackling stick, alarms them.

After enduring patience and perseverance the Lyre-bird may sometimes be seen and occasionally captured. It is of a wandering disposition, as distinguished ornithologists testify, traversing the same brush from one end to the other, from mountain-top to the bottom of the gullies, whose steep and rugged sides present no obstacle to its long legs and powerful muscular thighs; it is also capable of performing extraordinary leaps. "When running quickly through the brushes they carry their tails horizontally." The tail is a very beautiful affair; it is the making of the bird. The upper coverts are tinged with a fine rufous, shading to blackish brown toward the upper surface, while the under surface is a silvery grey. Beautiful transparent cross bands of colour decorate the tail.

In Victoria, Australia, the tail of the Lyre-bird differs from that of the Lyre-bird of New South Wales which we have described, the feathers being shorter and the bands stronger and broader. The aborigines of Yarra Yarra name the bird "Bullan-Bullan".

Nest.—Some naturalists state that the bird uses the same nest for several years. The feathers lining it closely resemble in colour those of the egg, so that it is not at all easy to descry the single egg amid the closely resembling feathers.

The egg is of a purplish-grey tint with purple-brown blotches near the larger end. It measures about $2\frac{1}{2}$ in. long by $1\frac{1}{8}$ in. broad.

The Young.—Almost without feathers, except for a few here and there, notably on the throat. The skin is a yellowish-grey; the beak black, the feet dark, the claws grey, the eyelids closed.

Food.—The food consists for the most part of insects—centipedes and beetles, and sometimes, when older, snails. When very young the cry is a high sounding “tching, tching”; but later a burbling, gurgling note is given out which is not unlike the “Bullan-Bullan” which the natives call the bird.

We now pass on to consider a representative of the Order of the Rasores, or Pigeons.

Order RASORES. *Family* COLUMBIDÆ. *Genus* PTILINOPSUS.

The members of the Columbidae family are found all over the globe. They are particularly numerous in Australia where there are no less than twenty species. Perhaps the simpler division for our purpose is into great groups; the one arboreal, the other terrestrial. That of the trees has a more expansive gullet than that of the earth, and broad hand-like feet which enable it to keep position on boughs and sprays while gathering fruit.

Some of the most brilliantly coloured of the Columbidae family are of the genus *Ptilinopus swainsonii*, and they are particularly numerous in Australia, New Guinea, the Moluccas, the Celebes, and Polynesia.

One of them, known as Swainson's Fruit Pigeon, is found in great numbers in Queensland amid the primeval forests of the River Clarence district, as the brushes are the most congenial to its nature for breeding and hiding.

The sexes are almost exactly alike in colouring. That famous ornithologist, Gould, describes the appearance thus: Foreheads and crowns deep crimson-red, surrounded, except in front, with a narrowing of light yellow; back of the neck greyish-green; all the upper surface bright green, tinged with yellow, the green becoming

deep blue towards the extremities of the tertiaries, which are broadly margined with yellow ; primaries slaty-grey on their inner webs and green on the outer, very slightly margined with yellow ; tail feathers deep green, largely tipped with rich yellow. The beautiful combination of vivid rich colours and delicate tints, produce a brilliant effect.

The total length of this gay little bird is about 9 inches.

Food.—Figs, wild grapes, and palm-nuts which abound in the forests (brush). The Pigeon, being an excellent judge, selects the best and ripest fruit, so frequently to be found at the extreme end of the bough or spray.

The *Gallinacæ*, which are included in the *Order* RASORES, are represented but meagrely in Australia. The Turnices and Quails are but poor substitutes for the gorgeous Peacocks, the Partridges and Pheasants, Grouse, etc., of other lands. The Turnices and Quails are probably distantly related to the Partridges, but the alliance is somewhat remote. We pass on at once to the *Order* GRALLATORES, which includes the Emu, the Cassowary, the Bustard, many varieties of Plover, the Dotterels, the Sandpipers, the Stilts, the Snipes, the Curlews, the Egrets, the Herons, and other beautiful birds of which many are found in all parts of the world.

One of the most ornamental of the Grallatores is seen in the Wattled Plover (*Lobivanellus lobatus*).

It is a showy, attractive bird, somewhat fearless as it frequents small ponds, near the dwellings of man. It is equally at home on open flats, or high dry grounds. It is common in many parts of New South Wales and Bass's Straits, particularly on Green Island in the Straits. Its manners are bold and attractive. It has been nicknamed "The Alarm Bird" because when it sees an intruder it rises from the ground, flies round and round uttering shrill screams of protest which are a signal to any birds and beasts in the neighbourhood to be on the alert.

It breeds in January. Its food consists of insects and worms. In many respects it resembles the European Peewit, but the wings are longer, so that its flight is more elegant and far less laboured in appearance.

The fine and really beautifully primrose-coloured wattle, the colouring of the bill and the eye, the fascinating pink of the legs and the contrasting colours of the plumage add to its distinctions. Black and white, cinnamon and purple, are enhanced by the brilliant yellow. It is decidedly one of the most charming of the Plover group.

We now concern ourselves with the *Natores* :—

Order NATORES. Family ANATIDÆ. Genus CHENOPIS.

One of the most ornamental birds of the *Natores* Order is the Black Swan. It is a noble-looking creature. It is found in the Southern and Western districts of Australia.

The writer's attention was first attracted to it on the occasion of a memorable visit to the beautiful and well laid out public gardens of the King's Park, at Perth, Western Australia. There, in an ideal setting, these ornamental and rare birds (since the genus is strictly confined to Australia) are seen to advantage. The magnificence and variety of the gaily-coloured flowering gum-trees (*Eucalypti*), the well-kept lawns, the delightful lake and the bluest of blue skies, enhanced by brilliant sunshine afford a perfect setting for the black plumage, touched with white, of the graceful creature.

In the year 1698 (240 years ago) there occurs in a letter written to Dr. M. Lister by a Mr. Witsen this record : " Here is returned a ship, which by our East India Company was sent to the South land called 'Hollandia Nova', " and the writer goes on to tell that Black Swans, Parrots, and many Sea Cows were found there. It seems that twenty-eight years later two Black Swans were brought alive to Batavia from Dirk Hartogs Bay, on the West Coast of Australia.

The Black Swan has been mentioned many times in literature, but very little has been written of its habits. On rivers, estuaries of the sea, lagoons and expansive pools of water over the whole of the southern portion of Australia, the islands of Bass's Strait and Tasmania, large flocks running into many hundreds of these interesting birds flourish. Neither the boisterous winds nor the aborigines disturb the birds. Regretfully we must admit the sad truth that the most deadly foe

of the Black Swan is the white man. Nothing would seem to satisfy him but the extirpation of the bird. One of his cruel methods of destruction is the practice of chasing the birds by boat at the particular time when they are unable to fly owing to the shedding of their primary quill feathers. Sometimes they are captured from mere wantonness ; at others for the beautiful down with which the breasts are clothed, which is highly prized and of monetary value.

It is on record by Professor Gould that he had heard of the boats of a whaler entering an estuary, the boats returning to the ship nearly filled with black swans destroyed in this manner.

Breeding Season.—From October to January.

The Nest.—This is composed of herbage, such as flags and rushes. It is large in size and for preference placed on an isolated island.

The Eggs.—The eggs are from five to eight in number, of a pale green colour or tint, with buffy-brown markings. Size $4\frac{1}{2}$ in. long, by $2\frac{3}{4}$ in. broad. The male and female birds take it in turn to sit on the nest.

One of the earliest and most successful breeders of the bird in this country was the late Samuel Gurney, Esq., who on his estate at Carshalton in Surrey, on the River Wandle, placed a pair which he purchased in Leadenhall Market. In seven years they bred sixteen times, having laid 111 eggs.

The reputation accruing to the Black Swan does not truthfully describe its character. It has the reputation of being cruel and fierce and destructive, whereas in its natural disposition it is gentle and tame unless molested or placed near the White Swan, which bird it will not tolerate for any length of time but invariably destroys.

In this sketch of Australia's bird beauties, we have confined ourselves to giving some brief notes about one specimen of six of the Orders into which at start we divided them. Had we space we could continue our description almost *ad infinitum*.

ROSEFINCH HYBRIDS, ETC.

By ALLEN SILVER

Although a friend of mine (a Mr. Wade, of Ashstead) some twenty years ago bred a hybrid from a Mexican Rosefinch and a hen Greenfinch, and another friend (Mr. Waller, of Norwood) bred several Mexican Rosefinch \times Canary hybrids in recent years, I thought I would make similar trials with a Mexican Rosefinch I had (recently killed by a weaver). He first bred three female hybrids with a Greenfinch, then three the next year paired with a hen Canary, and this year confined with a hen Bullfinch produced one young hybrid. This, I think, is the first attempt at such a cross. I am afraid the bird is a female. It resembles a nestling Bullfinch with modified bill and shows hardly any indication of a dark cap. The white bow over the upper tail coverts is distinct, but dirty, and the wings and tail are Bullfinch-like but browner. It is now in almost adult plumage.

The female Rosefinch \times Greenfinch hybrids showed no inclination to carry material the subsequent season. Male Rosefinch \times Canary hybrids (two used) whilst very amative were much too dangerous to use with a Canary. Whether the Rosefinch \times Bullfinch will show any inclination to nest remains to be tried. I had hoped to use this old Rosefinch with a Linnet next year, but if circumstances permit will use instead another bird, a Rosefinch or House-finch which is of a different race to the old bird. During the last few years we have reared to maturity here hybrids from Hooded, Black-headed, and European Siskins, Alario Finch, Serin Finch (*S. serinus*), Sulphury Seedeater, and hen Canary. The males of all have been tested repeatedly with hen Canaries in cage and aviary, and so far no F2's have been bred other than five, those being from a Hooded Siskin \times Canary hybrid, bred by Dr. Amsler. Two males have been used for two seasons, but no further fertility has resulted. One Hooded Siskin \times Canary male has been employed five seasons with no indication of fertility.

PETER JONES OPENS A LIVESTOCK DEPARTMENT

By N. WHARTON-TIGAR

The Secretary and myself paid a visit on the opening day, 31st March, to this very interesting establishment. It should prove a very useful addition to the London bird shops, and a good medium for obtaining all sorts of rare and beautiful birds.

A large spacious room on the fifth floor of Peter Jones has been well fitted up for the purpose, and as the whole front is practically window space, it is extremely light and airy.

We saw housed in the large show cages a very fine and varied collection. All seemed well and healthy, and besides numbers of the commoner species, contained many others seldom seen nowadays. I noticed particularly a large number of Alario Finches, which are such lovely little songsters, and are rarely seen in anything but very small numbers. I also noticed a very good show of Tanagers, the prettiest perhaps was the All-green one of the Chlorophonia group ; besides this species there were several Masked, very rarely seen, lovely Striated Blue and Black, Violet, and Superb. Many other rare birds were on show. I have been in again, and many of these have been sold, but another fine lot have come in. I understand no trouble is to be spared to obtain the best birds. So we all hope the venture will continue to be a great success. I write this note primarily for the benefit of those too far away to pay a personal visit.

AVIARY JOTTINGS

By E. F. CHAWNER

April is the month of heart searching for all who keep birds with a view to breeding them, whether it be but a pair of Canaries or a "first European record". We go about our business with anxious hearts and preoccupied expressions, wondering has this or that

cherished pair of birds everything arranged to their liking should they feel inclined to win that coveted medal for us ? Will they even go to nest ? Or, as in the case of a good many "pairs" are they really a pair at all, or just two hens making believe ?

Supposing these doubts are satisfactorily settled, and the birds are truly mated, will they choose a suitable nesting place or will they select the most exposed and draughtiest spot they can find ? Will the nesting material supplied meet with their approval ? Having chosen the site and built their nest, will they take the next step and lay in it ? Will the eggs be fertile and will the birds prove good sitters ? When nestlings appear, will their father drag them out of the nest and drop them in the most distant corner of the aviary ? Will the food supplied suit the babies ? Will the weather be favourable, or will piercing blasts and cold rain chill the life out of them ?

If all these questions are satisfactorily answered, there still remains the anxious wonder : How will the nestlings fare when they leave the nest ? Will they feather well, and will the old birds look after them until they can fend for themselves ? Or will they leave them to starve because they want to go to nest again immediately ? In short, their path is beset with anxious forebodings from the cradle to (so often !) the grave.

We here are no exception to the general rule : eggs are coming in with satisfactory regularity from Tragopans, Mikados, Imperial, and Edwards in appearance all that can be desired, but until the testing we shall not know if they are fertile or clear. Certainly the cocks all seem devoted to their wives, with one exception, our only cock Blyth Tragopan has fallen in love with the hen Satyr over the way, and repeatedly tells her so with calls which sound like a cross between a tom cat in love and a sick cow. She very properly pays no attention to him, walks about with her handsome spouse, and never casts a glance at the love-lorn swain opposite. A screen has been put up between them, and we hope it will be a case of "out of sight out of mind".

The Pheasants are very tame, so much so that those to whom they are accustomed can watch the cocks "display" without disturbing them. Tragopans especially are magnificent when they let down their

brilliant "bibs", erect their horns, and show off their beautiful plumage. They and their hens usually appear to be on good terms, more so than the true Pheasants, particularly the "Coppers", who often treat their wives with great brutality, even killing them if they show reluctance to comply with their lords' desires. Last year "Scintillans" was so vicious that he could only be allowed access to his hen when someone stood by to frustrate his murderous intentions, consequently all the eggs were infertile.

This year, up to date (touch wood!) he has turned over a new leaf, and we hope that the union will be crowned with offspring. Scemerring, on the contrary, is a timid creature, bullied and driven by his masterful wife.

When Pheasants are really familiar they show unexpected traits of character. A Cabot's Tragopan learnt to take monkey nuts from hand. One day we wished to remove him from his rather small pen to a much larger and better one some way off; this, of course, involved catching him and his chief friend undertook the job, thinking that the bird would be less upset than if a stranger caught hold of him. The job was soon done and Cabot safely inside his new abode. Next day his friend called on him and offered the customary nuts, Cabot eyed him coldly and stalked off, he showed as plainly as if he could speak that he did not intend to have dealings with anyone who abused his confidence under the guise of friendship. He took nuts from the rest of us as readily as ever. He kept up this attitude for several weeks, regardless of blandishments and entreaty, till one day he relented and let bygones be bygones.

A certain liveliness prevails in the duckery. The South African Shelduck laid as usual, they are very free breeders, and their ducklings easily reared. We feel more excited at the prospect of Orinoco goslings as this is the first time we have had eggs from this species. The gander is a handsome bird, and "shows off" by throwing an enormous chest when we approach him or his wife.

The small ducks on the river are laying, but it is very difficult to fit the right layer to the laid. So often the egg is deposited late in the evening or early in the morning and when it is found the Duck is disporting herself on the river with the rest. If these eggs hatch, we

should have an interesting medley of ducklings to sort out. Time will show.

The Cranes have been too much disturbed to be likely to lay this year. We have Stanleys, Demoiselles, Grey-necked, and Black-necked Crowned Cranes, White-necked European, Sarus, Manchurian, Australian, Asiatic, White, and Mexican Sandhill; these last are again incubating eggs, having laid a full month earlier than last year. We have also one only precious Hooded Crane, for whom we ardently desire a mate. All this family is highly decorative, and look beautiful stalking about with measured tread or dancing and trumpeting to each other.

A tiny pair of Galapagos Ground Doves nested in a little depression in a corner of one of the Pheasant shelters. One baby hatched and grew very rapidly, now it is quite grown up, and nearly as large as its parents, not that this is saying much.

BREEDING BRITISH BIRDS

By RICHARD JAMES

As a result of a small article of mine, published in the April issue of the Magazine, I have been favoured with some interesting correspondence on bird matters, and incidentally have been reminded that the study of our own native birds would seem to be sadly neglected. One can hardly believe this branch of our hobby to be exhausted. Perhaps it is left to the less ambitious fancier. I propose to write of my own impressions, and from my own experiences, giving special notice of the species mentioned as seemingly neglected.

With regard to the small wading birds, my experiences are somewhat limited and have been spasmodic. I remember being surprised to find that many species will live together all the year round, and seem to enjoy the company of each other; even so, I would hesitate to keep more than one pair of each species together in the breeding season, however large the aviary. I understand—though not from my own

experience—that the chicks of the average small wading birds are as easy to rear as are chickens. In my early enthusiasm I tried every conceivable method of feeding, only to find they seem to thrive better on a very simple diet. The said diet to consist of biscuit meal, scalded, strained, and a little minced beef mixed with it. My waders would never welcome any change from this, except when I would supply a few snails, earwigs, or periwinkles. I have had more surprises and less shocks in keeping small wading birds than with keeping British Finches.

The Redpoll, though not aggressive, seems to be too mischievous for a mixed collection. It is never safe to dogmatize, but I find these birds come into breeding condition quite easily, and, when building, will visit every other nest in the aviary to steal nesting material; it was a usual sight to see a Redpoll inadvertently drag out a clutch of eggs from the nest of a Canary or a Goldfinch, and if their own nest is looked at, they are likely to pull it to bits, destroy the eggs, and then start to build another nest on the same site. If a pair of Linnets have wintered in the aviary, one may expect them to go to nest the following spring, though just before coming into breeding condition they become very restless indeed; they become so irritatingly restless that their owner may be strongly tempted to liberate them, but they suddenly settle down and go to nest, and will rear two broods with ease on a diet of canary food, with the addition of almost any seeding grasses that are obtainable at the time.

The Bullfinch I have found more difficult, both cock and hen seem to be most aggressive. My Bullfinches would go to nest, incubate, but always failed to rear their young. I have yet to find a diet to suit them while feeding their chicks, they seem to require so many berries, and tinned berries seem to help the Bullie chicks to die more quickly than starvation. Plant life would seem to be quite out of the question in an aviary where a pair of Bullfinches are kept. I should imagine the best chance of breeding with Siskins would be in their first year of captivity, because if kept with a collection that would necessitate all kinds of food being provided, the Siskins seem to become too sluggish for breeding after the first summer. They are greedy, even so they make most attractive aviary birds. The Chaffinch will go to nest

more easily than any Finch I know, though they demand so much live food when feeding their young ; it would seem almost impossible to rear more than two chicks out of each nest. My birds would allow me to touch them rather than leave the nest while incubating. I have never reared more than three young Chaffinches in one season, from one pair. An unmated hen Chaffinch once almost killed a cock Canary because he answered her call for a mate. I have never had more than two broods from a pair of Chaffinches in one season, although I have had four broods from the Greenfinch and three broods from the Goldfinch, in one season. I have found the Goldfinch to be an easy bird to breed in captivity : the last brood of the season have always been the strongest birds, probably because they would be fed by both parents for a longer period, and also because more thistle heads are obtainable at the later date. On one occasion four hen Goldfinches were run with one cock Goldfinch. Each hen went to nest and hatched out a clutch of chicks, and each hen deserted the brood as soon as they were hatched. The cock bird ignored each hen after she had produced a full clutch of eggs. Although Greenfinches are so prolific, I have persistently lost 95 per cent of the chicks by the 1st November the same year.

On one occasion only have I had young from the Yellow Bunting : the young were not reared, the parent birds required more live food than I could provide, the chicks survived for seven days only. I should imagine the Reed Bunting to be the most desirable of all the British Buntings ; the species seems to be the most confiding, but if kept with a mixed collection and mealworms are supplied, the cock bird is likely to get more than his share, and therefore becomes liverish. Stagnant water seems to attract minute insects which seems to keep them fit.

The Bramble Finch was ever a favourite with me, until I found he had a playful habit of swallowing Canary chicks whole.

The above are some of my conclusions after many years' experimenting. I would never keep more than four possible breeding pairs in one aviary, however large, during the breeding season. The Thrush family I exclude from the Finch aviary. The Tit family I am content to study in the wild state only, their habits being far worse than those of the Bramble Finch.

LONDON ZOO NOTES

By N. WHARTON-TIGAR

In conversation with members of the Council, it was suggested that I should tell readers this month of the Starlings and Mynahs in the collection.

The Zoo Gardens are at the present time most attractive, the fresh green of the trees, many beautiful shrubs gay with flowers, and the spring bedding of early tulips and deliciously scented masses of wall-flowers make a delightful picture. Reluctantly I leave this scene and go on to the small Bird House, and as I pass I notice the many occupants of the aviaries with outside runs also realize that spring is here, and are full of the joy of life. Several are carrying nesting material, especially the Hawfinches. After a look round I went in search of Keepers Tanner and Raggett, who were most kind and helpful in telling me the different species I should find, and afterwards the former spent a long time helping me with the names, etc.

There are at present some very fine specimens of Starlings in the Gardens. They are fine aviary birds, and are at their best if given plenty of room to fly about, and look beautiful with shimmering plumage changing colour every minute as a different light falls upon them.

Of the long-tailed varieties there are at present two species, both from Abyssinia; the most gorgeous of all, the Royal Starling (*Cosmoparus regius*) gowned right royally, and a handsome specimen in finest condition of the Crowned Starling (*Galiopsa salvadori*).

Glossy Starlings of the genus *Spreo* are well represented. The Superb Glossy Starling (*Spreo superbus*), East Africa, is very fine, and the Bird House has a very fine specimen, among others, bred in the menagerie 26th June, 1929. Near it is Shelley's Starling (*Spreo shelleyi*) from Somaliland, not often seen; the Beautiful Spreo (*Spreo pulcher*) did not strike me as being as lovely as the others, the commoner Green Glossy Starling (*Lamprocolius chalybeus*) N.E. Africa, for instance, and the Purple-headed Glossy (*L. purpureus*) West Africa, are both exquisite, and to be seen here in grand condition. A great contrast to the above is the Bald-headed Starling (*Sarcops calvus*) from the

Philippine Islands ; grey and black with naked flesh-coloured head, a very strange bird and rare, brought over, I believe, by Mr. Walter Goodfellow. There are two varieties of the Amethyst Starling (*Pholidauges leucogaster*) from Gambia, and Verreaux's Amethyst Starling (*Pholidauges leucogaster verreauxi*) ; what a glorious bird this last-named is ; the Zoo have kept their specimen in the wonderful condition it is to-day since June, 1921. Seventeen years !

One of the rarest Starlings in the collection is the Chinese (*Sturnia turdiformis*) also brought over by Mr. Goodfellow. The Pagoda Starling (*Temenuchus pagodarum*) from India, is beautiful and very amusing, and the Mandarin Starling (*Sturnia sinensis*) is very small, white and grey, with black wings and tail. It is said to breed easily. The Rose-coloured Starling (*Pastor roseus*) is a handsome commonly imported species, with a crested black head—the rose colour fades in captivity. It is a peaceful and sociable bird.

Then there is the Chesnut-winged Starling (*Amydrus morio*) from South Africa, and finally a grand pair of Rothschild's Grackles, five or six years in the collection, and like silk, their plumage snow-white and glistening. I was told they would most likely breed if they could be given an aviary to themselves. So far only Mr. Ezra has bred this species in captivity.

The Mynahs are an amusing lot, headed by the large Nepal Hill Mynah (*Eulabes intermedia*), North India. Two specimens in cages are always surrounded by visitors listening to their distinct talking. They are not always willing to do it, because a great deal of their time is taken up in eating. The Crested or Chinese Mynah (*Æthiopsar cristatus*, syn. *Acridotheres cristatellus*) is a good mimic too, for the one at the Zoo was copying exactly his neighbour in an adjoining aviary, the Laughing Kingfishers. Then there is the Common Mynah (*Acridotheres tristis*) India, and the Ceylon Mynah (*A. tristis melanosternus*). The Brown or Jungle Mynah (*Æthiopsar fuscus*) India, and lastly the small and very charming Golden-crested Mynah (*Ampelicip coronatus*), Burma. While I was watching, one in the outside flight treated me to a very quaint little song.

ORNAMENTAL PHEASANT SOCIETY NOTES

During the month of March the membership of the O.P.S. reached the very satisfactory total of 500 and we are naturally proud of this achievement. When the Society was first formed it was thought by some doubting "Thomases" that if we could keep an average of 100 members we should feel satisfied but that pessimistic outlook soon went by the board, for three months after our formation the century had "gone up". As this may be considered a landmark for the O.P.S. it may be as well roughly to review our work and discover if the Society has merited the support received. By propaganda work and by the extensive use of the Press, and especially is this due to the AVICULTURAL MAGAZINE and *Cage Birds*, we have increased the number of Pheasant fanciers by at least 50 per cent, probably the percentage is far greater. That in itself is highly satisfactory. We have established the showing of Pheasants and the results of this activity, although not obvious, must in time prove beneficial to our hobby, as birds of such beautiful plumage are bound to make an appeal to a larger public sooner or later. By the formation of the O.P.S. there has been a happy and sincere exchange regarding the best methods of keeping and rearing these birds. In this matter our Journal has been a direct method and perhaps even more important still it has caused many members to correspond and this has produced an interchange of thoughts regarding the culture. In one respect the Society cannot yet claim a success. We had hoped to import for the benefit of our members many rare Pheasants and such importations would have been carried out under ideal conditions, the procedure was well in hand but we did not meet with the support that we anticipated. A reason for this may be found in the fact that under the scheme members were asked to find 50 per cent of the money before the birds were shipped and this undoubtedly proved unpalatable to many. We shall try again, I feel sure, and make the scheme more "appetizing". We must not forget the social side of our activities. Our two general meetings are well attended and these functions prove not only interesting but many lasting friendships have been made as a direct result of members coming together in this social manner. I

believe it is almost settled that our summer meeting will be held at the London Zoo and it is probable that the meeting, which will be held in the morning, will be followed by a lunch. If this materializes we shall once more be indebted to the London Zoological Society for the use of their accommodation.

JEROME LAMBERT.

CORRESPONDENCE

MADAM,—The question of Keas being sheep-killers or not is still a vexed one, from an article in another paper recently. All aspects must be studied before any decision may be made. Anatomically the Keas' "Cruel Beak" needs mention. Regrettably the Kea (for the Kea) has a very long upper mandible, which may look dangerous. In truth, Keas have not a strong beak and are actual "nibblers". A Kea's beak, in captivity, fails to make an impression on hazel-nuts, walnuts, and brazil-nuts. Compared to other birds, the Kea's feet are weak and the claws are by no means fearsome. Mealworms, which are attractive to most insectivorous birds, are just ignored by the Kea.

If one can, by aid of a pair of forceps, persuade a Kea to pick up a mealworm, the grub is dropped at once. A handful of mealworms will walk away among several Kea's feet, and meantime these birds are expectant for something, either the aforesaid forceps or a bunch of keys or peanuts, etc.

In conclusion, one of the Keas here was a bit damaged in a high wind. The birds pinch fingers if caught, and to save my delicate hands the man who looks after them actually put his finger in the lion's mouth and allowed the bird to hold his finger while I examined it.

W. L. ENGLISH, M.B.

HIGH STREET,
HASLINGTON, CREWE.
21st March, 1938.

NAMES WANTED

MADAM,—Could some member of the Avicultural Society tell me something about a very nice little Finch which I acquired recently, called, I think, the "Black and White Crested Finch", and which is new to me.

It was one of a small lot received some months ago by one of the dealers, two, from the same consignment I imagine, having been shown at the last Crystal Palace Show. I should be interested to know what is its country of origin (it looks South American), and what are the sexual differences. The bird I have is a male, having a sweet though, so far, short song, and is an elegant and taking little fellow with his slender black vertical crest and neat black cravat and facial bands. He seems quite hardy and easy to keep,

on millet seed principally, with a mealworm and some ants eggs now and again.

I have lately received a letter from a friend in the Argentine telling me that he is sending me a pair of "Corbatitas", another small greyish Finch, a nice little singer, also having a neat black cravat (hence the name), and with which I am very familiar, for several pairs used to build their frail nests of palm fibres in the peach and "Mandarin" trees in my garden out in Uruguay, in pleasant years gone by. And yet I do not know his scientific or his English name. (Not the Bib Finch, surely?). Perhaps you can tell me?

H. C. MARTIN.

"LAS CAÑAS,"
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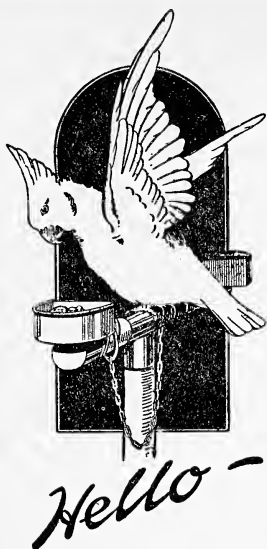
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LORD SYSONBY, Great Tangle Manor, Guildford, Surrey. Proposed by A. F. Moody.
ARTURO TUIS, Wien XIII, Stadlergasse 17, Vienna. Proposed by P. J. Lambert.

NEW MEMBERS

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J. P. DOBBIN, "Startel," Sussex Road, Petersfield.
CHAS. S. PALMER, F.Z.S., F.B.S.A., Flat 11, Manor House, Honor Oak Road, S.E. 23.
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HAROLD T. KING, to 41 Compton Road, Sherwood, Nottingham.

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The charge for Members' advertisements is ONE PENNY PER WORD. Payment must accompany the advertisement, which must be sent on or before the 20th of the month to Mr. T. H. NEWMAN, 46 FORTY AVENUE, WEMBLEY PARK, MIDDLESEX. All members of the Society are entitled to use this column, but the Council reserves the right to refuse any advertisement they consider unsuitable.

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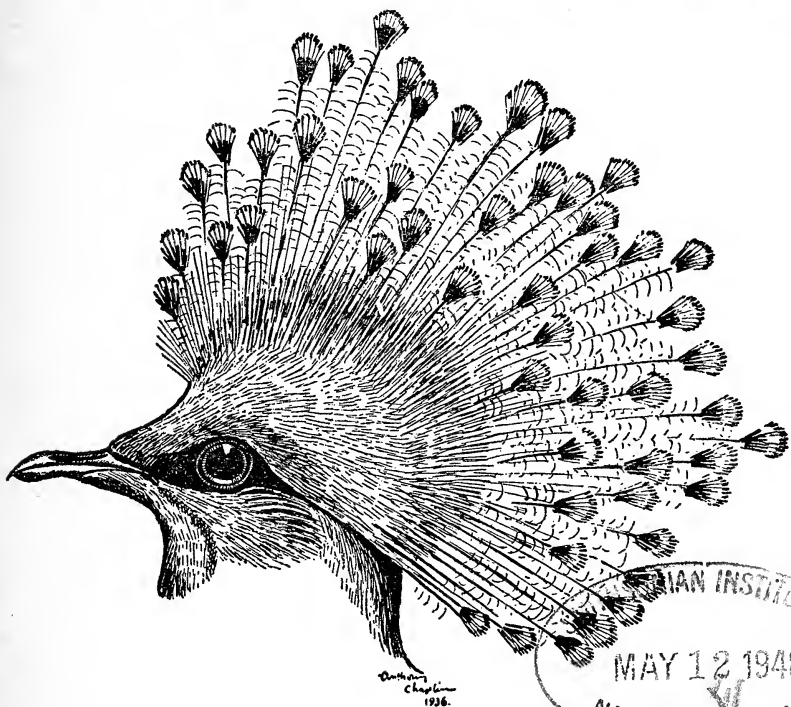
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THE AVICULTURAL MAGAZINE



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THE AVICULTURAL SOCIETY

FOUNDED 1894

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The Subscription to the Avicultural Society is £1 per annum, due on the 1st of January in each year, and is payable in advance. The entrance fee is 10/-. The *Avicultural Magazine* is sent free to members monthly. Members joining at any time during the year are entitled to the back numbers for the current year, on the payment of entrance fee and subscription.

ALL SUBSCRIPTIONS SHOULD BE SENT TO THE HONORARY SECRETARY AND TREASURER, MISS KNOBEL, 86 Regent's Park Road, London, N.W. 1.

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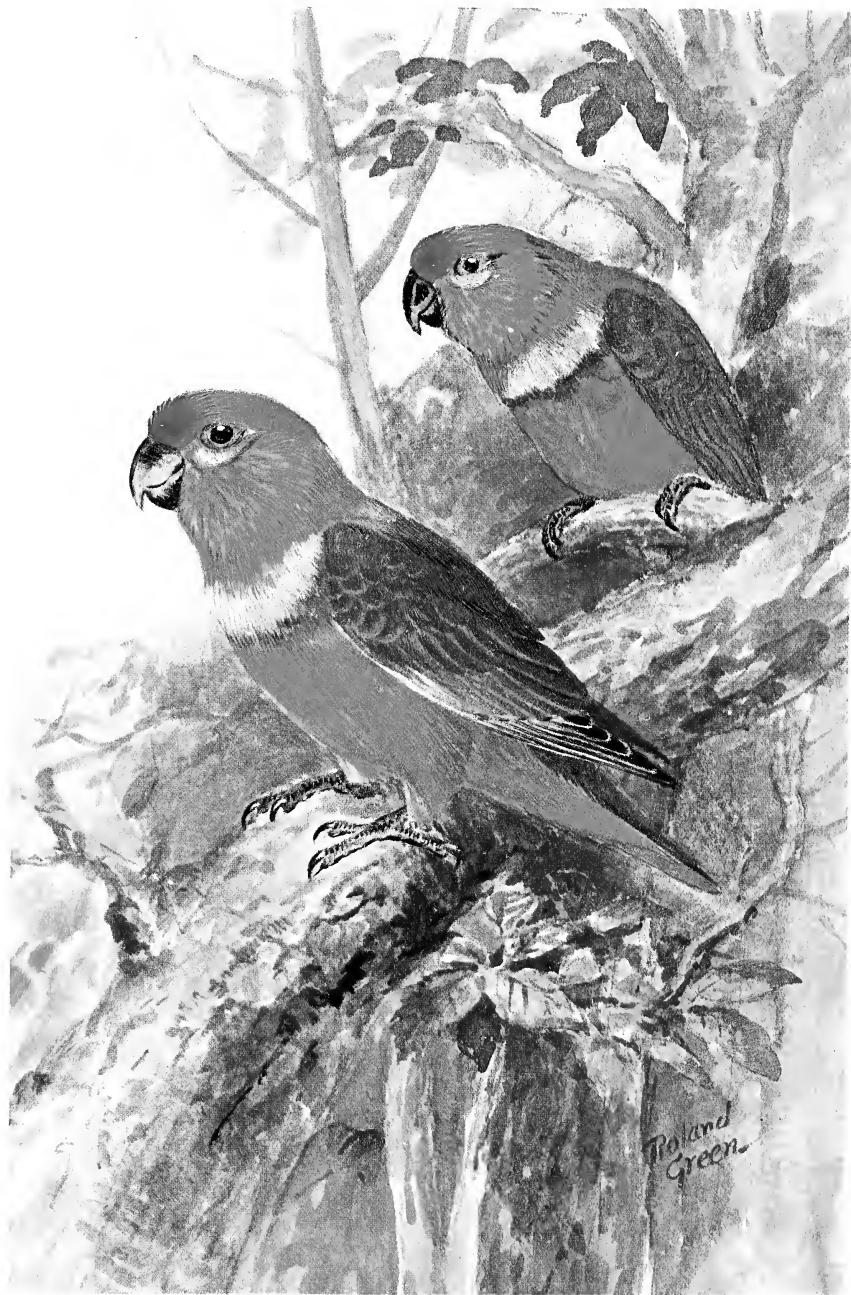
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JUNE, 1938.

THE WESTERN GOLDEN-HEADED DWARF PARROT

(*Cruopsitta desmarestii occidentalis*)

By LORD TAVISTOCK

The consignment of seven Desmarest's Dwarf Parrots recently brought over by Mr. J. C. Frost introduced a species entirely new to aviculture, a description of which is rendered unnecessary by the excellent plate which accompanies this article.

There is always a great excitement and interest about seeing for the first time in the living state a bird previously only known to one as a museum skin, and sub-generically quite distinct from anything one has ever kept.

In size and build Desmarest's Dwarf Parrots are not very unlike some of the *Poiocephali*, especially Meyers' Parrot, but there the resemblance ends for, in spite of its lack of a brush tongue, in voice and movements the Dwarf Parrot is almost a typical Lorikeet.

The food appears to consist almost entirely of fruit; my birds eat apple, pear, grapes, and banana, on which latter they were, I believe, imported. They drink a little Lorikeet's food (Dr. Allinson's), but I have a strong suspicion that they would get on perfectly well without it. Seed they will not look at, although they like barking the green twigs of a sycamore branch; are very fond of mealworms;

and chew up Iodine Nibbles faster almost than any other birds in the collection. My four are at present living in a flight cage and agree well together. They are all exceedingly alike in appearance but, as museum skins show practically no sex difference in plumage, I am hoping that I may have at least one true pair, as two preen each other's feathers in an affectionate way.

My birds bathe quite freely, but ignore the sleeping boxes with which I provided them and which in consequence have now been removed.

In saying that the Dwarf Parrots' voices resemble those of Lorikeets I ought, in fairness, to add, "in their more restrained moments." They make themselves heard, it is true, but do not, as far as I have yet observed, ever indulged in anything approaching the ear-piercing noises of which Swainson's are so fond.

The flight is swift and direct, the wings being pointed and rather short.

SOME EXPERIENCES AS AN AMATEUR IMPORTER OF FOREIGN BIRDS

By SYDNEY PORTER

While realizing that there are fellow members who are in a very much better position to write on this subject than I am, it might be of some little interest to give some of my personal experiences as an amateur importer of foreign birds mainly for my own aviaries.

At first one is liable to be over enthusiastic ; one hears that such and such a bird can be bought in its native habitat for a matter of 5s. or so, while its market value over in this country (England) is perhaps £10. Well, it all sounds very easy to get someone to send the birds on in charge of the butcher on a certain ship ; to be at the docks when the birds arrive and carry one's treasures home, saving at least £8 or £9 on the transaction. It may sound all right according to theory, but take it from me, you will find it far cheaper in the end to purchase your birds from a reputable dealer or collector in London than import

them for yourself. The trouble and worry will be likely to lead, if not to a nervous breakdown, at least to premature grey hairs. I notice that I have quite a few myself now, which I am sure is due to long contact with the Customs Authorities!

The first birds I ever received were five rare Parrakeets, but this was in the good old days before there were any customs duties or restrictions on the importations of Parrots. In those days one heard of no such things as "Bills of Lading", Certificates of Origin, and other such complicated things, one simply walked on to the ship, told those in authority who one was, tipped the butcher, and walked off with the birds. Nothing could be simpler. Then came all the various import restrictions and customs duties. Some time afterwards some more birds arrived from a friend in New Zealand: they consisted of New Zealand Zosterops and a pair of Black Swans. The birds were duly landed. A friend in London lent me a fast car and a chauffeur, if it hadn't have been for these I might have been at the docks yet!

The birds were brought off the ship, the Zosterops put on the back seat and the Swans loose in the back part of the car. All was set, and we were ready to start back. A customs officer now appeared on the scene: Had I signed form number "so-and-so" relating to the "Ad valorem duties"? No, I hadn't, but I would do so as soon as I could get one, where could I get one from? It wasn't his duty to give advice! There was about a mile's walk to the nearest custom house on the docks; could I have form number 12345/12345/12345, or whatever it was? No. Well, where could I get it from? They didn't know, I must find out. Well, the best thing to do, apparently, was to go to the office of the shipping company in the City, six or seven miles away through London's worst traffic. No, they couldn't tell me where I could get the form from, their responsibility ceased when the birds were taken off the ship. If I went to Thames House, I was told, I might get the form there. After being rebuffed several times at Thames House, I waited meekly with hundreds of other seemingly disappointed clients on the forms in the main hall. At last plucking up courage, I demanded the said form from the nearest clerk in the main hall. "What was it for?" Live birds—better see the Department for the Importation of Fat Stock, or the Importation

of Aeroplanes and Component Parts, or possibly the Department for the Importation of Ducks and Geese from the Continent, etc., etc. At last after inquiring from about a dozen officials, each one more discourteous than the last, I received the cherished form. This I bore back in triumph to the customs man at the Dock. Here were more officials and delays. No, I had the wrong form! Well, where could I get the right form from? I must find out! What did I think the customs officers were there for—to act as an information bureau? In the meantime, the birds had been unloaded into one of the wharf sheds and there seemed little likelihood of my retrieving them before they died of old age. To cut a long story short, after two days' oscillation between Thames House, Adelaide House, the Port of London Authority, the shippers, and to say nothing of frequent visits to the Docks to see how the birds were getting on, and travelling several hundred miles in London's worst traffic, I was about to give up the quest and evidently looking very despondent in Adelaide House (one of London's chief custom offices) when I was approached by an individual who politely inquired if he could be of any service. I realized by his attitude that he could not possibly be connected with the Customs so I told him my trouble and he proved to be an importer's agent.

In less than two hours we had obtained the form from one of H.M. Stationers in an obscure street in the City, and the birds were duly taken away from the docks. The agent's fee was 5s. and it was well worth it. Though I think this was only a kind of bait, as his price gradually went up to five guineas. After then I got someone else. But I think at the time I would have paid £5, so desperate had I become. The agent's advice regarding getting the customs officers to do anything was certainly very unflattering from their point of view.

It is practically impossible for the lay person to get birds out of the London Docks unless he employs an agent who is well up in the tricks of the trade. Now, I never go down to the docks: upon the rare occasions when I do receive birds I leave it in the hands of an agent. Unfortunately this is rather an expensive business, for besides the agent's fee of several guineas there are dock fees, Port of London Authority charges, tips, cartage charges, carriage, duty, etc., etc.

Often the charges exceed the value of the birds themselves. The customs officials, instead of being helpful, place every obstacle in one's way, not only that, but they treat one as though one were asking for the loan of a "fiver"! After some years of importing birds by the means of agents, I gave it up as a disastrous failure. Many exceedingly rare and valuable birds have been lost through lack of attention given them on board the ship, and bad food and ignorance on the part of those supposed to look after them. Sometimes, if the birds have not died on the voyage, they have arrived in such a condition that they have succumbed soon afterwards.

Consignments of birds which I have sent in exchange to friends overseas have proved equally disastrous. Perhaps, owing to some trouble with the customs officers, the birds have been left on the dock side in a biting cold wind for the best part of a day, consequently in a short time they have died of pneumonia. The cost of shipping birds from this country is excessive; there are a hundred and one expenses which, individually, are not large, but which all mount up and in the end assume an alarming total.

At last so distressing did the mortality become and so heavy the debit that I decided if I wanted any more birds I would fetch them myself and not leave them to the tender mercies of butchers, bakers, and suchlike on the ship. Having through circumstance beyond my control to spend a certain part of every year abroad, I usually choose as my place of residence the habitat of some bird which I desire and when there use every effort to procure it.

At first when one is "green" there are many pitfalls. One always forgets something, food runs short, cages are inadequate, and a hundred and one other things, but through bitter experience, which is the best teacher, one soon learns.

In the first place, when I contemplate such a trip, a number of rough cages are prepared, usually "Tate" sugar boxes which are obtainable from the family grocer at the cost of a few pence. These are divided into two compartments, each one will hold a bird the size of a Thrush; the great thing is never to overcrowd your birds and it is usually better to bring birds over in cages to themselves. Overcrowding is the cause of 90 per cent of the mortality in importing

birds. When once a bird becomes messed up it soon loses heart and dies. Besides, birds often fight badly when confined together in a small space. It is really no advantage to economize on the cubic space, even if one does pay a little more, one's birds arrive healthy and in perfect condition. To get back to the sugar boxes, I get wire fronts made to fit, also trays for the bottoms. The cages are then knocked to pieces in sections and packed flat so that they will travel easily on the ship, and in this way one hasn't to pay freight on them. It is advisable to take a few yards of $\frac{1}{2}$ -inch wire netting in case one runs short of cages. In that case, boxes or cases can often be obtained from ports en route or at one's destination and the ship's carpenter will, for a consideration, soon knock up a cage for one. It is essential for one to take food, especially such stuff as Mellin's or Horlick's, for Lories or Sunbirds, for often in small obscure parts of the world these are unobtainable. Honey and condensed milk can usually be bought anywhere, but usually the honey is of poor quality or contains preservatives, as I know to my cost, when I lost a whole lot of Sunbirds through giving them cheap honey, all I could get, in Singapore. It is well to take seed, Parrot seed particularly, especially if one goes to obscure tropical countries and also "soft food" which is often quite unobtainable. Of course, with New Zealand and Australia it is a different matter and one can usually obtain all one wants in the matter of food.

The ship's chef or butcher will, also for a consideration, supply one with hard-boiled eggs, sponge cakes, and also chopped-up fresh meat for such birds as Kingfishers, Birds of Prey, etc.

What I find is most essential is a bundle of old newspapers, this is by far the best covering for the bottoms of the cages. Cut to fit the trays and laid down in several thicknesses, the soiled sheets can be changed several times a day and in this way the birds do not dirty themselves. A bucket, a scrubbing brush or two, a bundle of mixed thicknesses of dowelling from the local woodwork shop for perches, some "bird-cage" wire, plenty of food pots and tins, and an escape-proof box of mealworms are about all the amateur importer needs, except, and which is perhaps the most essential of all, plenty of tact. This latter is very necessary in making friends with the following of

the ship's personnel, firstly the chief cook and the butcher, though in very small ships one man often combines the two jobs. These two are the most important people on board to gain favour with, for on them one relies for all manner of things such as extra food in the shape of fresh vegetables, eggs, fresh meat, hot water, extra culinary utensils (perhaps a very large meat tin or stew pans so that one's ducks can have a swim). They will also put any perishable food in the cold storage. If one falls out with the cook or butcher one has a very difficult task on board ship, but one usually finds the men in either of these capacities very affable kinds of individuals, as indeed nearly all seafaring men are.

The next person to get on good terms with is the chief officer, for he has to do with the accommodation and it is very essential to have heated quarters for birds from tropical climates when they reach the so-called "temperate zones". I find that it is better when booking one's passage to mention the question of accommodation for the birds and if possible to see it beforehand. Very often one is assigned very unsuitable quarters, such as in the paint house or in a dark store with no light. If one threatens to book by a rival company one is quickly allotted more suitable accommodation for one's livestock. Once a ship's doctor had to give up his cabin for my birds, consequently we were hardly on speaking terms the whole voyage, which was a very long one. Fortunately I had no need for medical assistance on the voyage home, or I may not have been writing this !

The carpenter is another person with whom it is advisable to get acquainted, he can help one a great deal in the making and fitting up of cages, etc. One often finds that after a few days a couple of birds in one cage will take a dislike to each other and start to fight : this usually ends in death unless each bird is caged separately or a division put in their cage. He is useful for borrowing such tools from, which one may have come without.

Taken on the average one finds sailors much more affable and congenial than "landlubbers", their very calling seems to demand more tolerance and forbearance than is required on shore.

One's fellow passengers often prove a great trial, wanting to see the birds at all kinds of inconvenient times and offering all kinds of

advice and bringing to see the "pretty dicky-birds" spoilt children who bang on the cage fronts to make the birds fly.

To get away from all these needless distractions, I always travel by "intermediate" steamers or cargo boats which carry only a few passengers. On these there are few if any women or children, no wearying rounds of deck sports or cocktail or bridge parties to distract one's attention from their feathered charges. Only those who have had to get up at 6 a.m. after a cocktail party to look after one's birds know what a relief it is to be on a ship where there are no such distractions or temptations.

It is of little use going to a port and expecting to pick up rare birds from the native bird sellers, though in such large cities as Buenos Aires, etc., it is quite possible to pick up rare birds from the various bird shops. To get some special bird one has often to make long stays at remote inland settlements and often make journeys through wild and rough country, consequently one has to put up with a great deal of discomfort and inconvenience.

It is surprising how quickly one makes friends with the ship's crew if one has livestock on board, it seems to act as a kind of introduction to everyone from the captain downwards. It certainly opens up a new subject for conversation, of which there is usually a dearth on board ship after the first week or two, and in this way I have made many pleasant friendships between members of the ship's personnel and myself.

I once heard of a lady who had three unmarried daughters who were getting dangerously near the "left over" stage, so she sent each one on a voyage to India and back with a handsome blue Persian cat, which acted as a kind of "open sesame" in the matters of introductions—"Does this lovely pussy belong to you?" kind of thing. At all events the trick worked and the lady was rewarded with three sons-in-law! But I am wandering from my subject.

Sometimes one meets with nasty and officious captains who out of sheer "cussedness" object to birds being put in empty cabins and who arrive on their daily tour of inspection just as one is cleaning out the cages, and make all kinds of sarcastic remarks such as "kindly remember that human beings have to sleep here after

you've finished with it". Fortunately ones like that are not often encountered.

Occasionally enthusiasm has overrun discretion and I have found myself on board with dozens of huge crates and cases full of birds. The climax was when I left Singapore with over 200 birds, mostly large ones. I had to recruit a Chinese servant from the crew and even then I was working from 6 a.m. to 7 p.m. with only time off for meals. Even then I had a very happy voyage, but it cured me of ever bringing large consignments of birds over again. For one thing I hadn't the accommodation and I had to sell some of the birds, a thing I hate doing. Now I only bring, say, a dozen pairs of birds, which I know I can accommodate and which only take a couple of hours a day to look after on the ship.

Quite recently, when in Australia, I had the utmost difficulty in obtaining permission to take even the commonest birds out of the country, some of the officials being rude and rather discourteous. Had I been a foreigner armed with a letter from an obscure trading Continental "Zoo" I should doubtless have been met with open arms and allowed to depart with innumerable birds. However, the authorities in New South Wales allowed me to take away a Lemon-crested Cockatoo, four Waxbills, and a pair of Red-rumps, my application for other birds being ignored. Through the indefatigable efforts of Mr. Turner, the leading bird dealer in Sydney, I was able, at the very last moment, to get permission from the Queensland authorities to take away amongst others, Regent Birds, Cat Birds, Satin Bower Birds, etc. Before the ship sailed an official who was in charge during the absence of the ornithologist from the Museum, and who advises the authorities in New South Wales regarding the export of birds, came down to see that I was only taking my proper quota of one Cockatoo and four Waxbills and the pair of Red-rumps. When we discovered him examining the other birds, he rather reminded me of a constable who had just come across a coiner's den! Armed with a pencil, note-book, and assistant he was taking down all particulars, but when we showed the permit—well! Later, he got into such a rage that I think half the ship must have heard him shouting. On the same ship the only place allotted for my birds was

in a very conspicuous place on the "Tourist" deck. The birds constituted a free show for all and sundry.

The crates with the birds in were mainly used as seats by the passengers who, when the crates were not the convenient height, just turned them over! Had the passengers been only provided with boxes to sit on instead of chairs, no doubt there would have been very vigorous complaints to the purser. However, I soon found a way of discouraging this. I just put the droppings and debris from the bottom of the cages when I cleaned them out, on the top. No doubt people thought I was filthy but it served my purpose. When a fond mother was watching her offspring banging the fronts of the cages to frighten the birds, I turned the boxes round as inconspicuously as possible, but I heard the parent say in terms of utter disgust, "Just fancy, wont even let a little child look at his birds." I felt like telling her just what I'd like to do with her child!

There's a great deal of worry and trouble in importing birds oneself and I often wonder if it wouldn't be the best to buy one's birds at Home, and let someone else do all the worrying, but it is very interesting and one meets in one's travels some very charming and interesting people and often one gets birds which it would be quite impossible to get in England. One also gets to know the birds very much more intimately. "Red-tape" is a joke to most people but when one comes up against it regarding exporting and importing birds it is far from a joke and it makes one do things that aren't always compatible with one's ideas of ethics!

CHOUGHS

By SYDNEY PORTER

A few hours' drive from London, that is if one is a fast driver, is a rocky windswept promontory. It used to be a lonely enough spot before the advent of motor cars, when a few poor farmers struggled to wrest a livelihood from their small stone-walled fields on the tops of the crumbling cliffs.

Now all is changed, the little Square of the near-by village is, during the summer months, thronged with cars and cycles, and the farmers are now able to buy the luxuries of a modern age by letting "desirable sites" to the campers and motorists who like to bring their labour troubles with them in the shape of a tent or caravan.

On the top of the rugged walls of rock is one of Nature's loveliest gardens, where during the summer months the ground is like a many-hued carpet, with a thousand and one flowering plants which have been dwarfed by the bitter winds which drive up from the sea during the winter time.

Many were the halcyon days spent in this haunt of the "Russet-pated Choughs". Lying on a carpet of cliffland flowers with the air thick with swarms of butterflies, delicate Blues, coppery Fritillaries, gorgeous "Peacocks", many-hued "Tortoiseshells" and others too numerous to mention, one could watch many phases in the domestic economy of these birds. They weren't at all frightened at our intrusion and sometimes one would surprise a bird only a few feet away from the top of the cliffs. The Chough would certainly eye one with a mixture of surprise and curiosity and linger perhaps for a few minutes before flying off to the opposite face of rock where he no doubt felt a little more secure. Here in the bright sunlight on the cliff face their scarlet beak and legs glowed in contrast to their glossy black plumage.

Choughs are great diggers and seem to obtain most of their food in this manner. They dig with great gusto in the dry turfy soil on the ledges of the cliff face. I think they must unearth the ants' nests which abound in the soil on the cliffs. Sometimes a bird would unearth something, and he and his companions would have a real good feed. At other times one would see a bird with quite a large white grub in his beak which would be battered about for quite an appreciable time before it was finally eaten.

Sometimes, on a large patch of dry earth, the bird would be in the centre of a cloud of dust caused by its digging operations, or at other times there would be quite a miniature avalanche of earth and stones as the bird dug on the steep cliff sides.

I never saw the Choughs away from the face of the cliffs, and I believe that only when they are very hard pressed for food do they

feed on marine life. The flight is much more light and buoyant than that of a Jackdaw and the large square tail seems to be fastened very loosely to the body as it pivots from side to side like that of a Kite. The call is very much like that of a Jackdaw, though some naturalists say it is very different.

Sometimes it was possible to have within sight at one time six out of the eight British representatives of the Crow family—the Magpies and Rooks in the fields on the cliff tops, and Ravens, Carrion Crows, Jackdaws, and Choughs on the cliff face—and of all of these birds the Chough is the tamest and most confiding.

Fifty or sixty years ago the Chough was a common enough bird in the district, and the old inhabitants have told me of having to stay away from school as children to frighten the Choughs away from the newly ploughed fields. The farmers thought, seeing the birds probing in the newly ploughed soil, that they were eating newly planted wheat, while in reality they were only after the grubs which later on would feed on the growing wheat. Now all is changed; the flocks of Chough have gone, never to return, and to-day it is one of our rarest resident birds. Its greatest foe at the present time is the egg collector who, through substantial bribes paid to the local farm workers, knows the exact location of the nests and the time the full clutch is laid. The information is telegraphed to the collectors, who arrive in the early hours of the morning by car, meet their informants, take the eggs, and are back in their respective homes in a few hours' time. There seems little hope for the birds, for the old pairs, having their nests systematically robbed each year, fail to produce any young ones to take their place when their allotted span is finished. And so in a few years more the Chough will be placed on the list of our extinct birds.

Years ago the Chough was a well-known show bird and in the days of my childhood, just before the War, I have seen as many as four or five in the class for "Softbills" at the local shows. I never had one myself, though I have kept the nearly related Alpine Chough, which is not nearly such an attractive bird as our British Chough.

It was a delightful bird to keep, full of curiosity, and by all accounts a very long lived one too. There were some in the Wader's Aviary at the London Zoo which, I believe, had been there for very many years.

REARING BRITISH FINCHES

By RICHARD JAMES

The average bird fancier, keeper, or student cannot afford to be reticent. The hobby is too involved for one to hope to gain one's precious data from one's own experiences only.

Often the more ingenious fancier would seem to be too modest to write of his findings, and it is left to the less ingenious to provoke him into shedding his modesty.

Dr. Amsler seems to have had considerable experience with breeding birds and, as an experimentalist, the said fancier is most enterprising. In reading of this fancier's failures, I have gained more help, and also, I must confess, have gathered more comfort and inspiration, than from reading of the easy successes of many other fanciers.

I invariably keep a few Canaries as possible foster-parents for chicks from British Finches, but Canaries have never yet obliged by rearing a single chick of another species for me. Bullfinch, Linnet, Siskin, Chaffinch, and Bunting eggs have been incubated by Canaries, but the chicks have always been deserted within twenty-four hours of hatching. This, of course, was more than half expected with regard to the Chaffinch and Bunting.

All Chaffinches reared in my aviary were reared almost entirely on earwigs, my Chaffinches would never feed on gentles to any extent. The earwigs I obtained by placing dozens of discarded cotton garments over a garden fence. When a garment was infested with earwigs, I would drop the garment in a pail of hot water, and would get thousands of earwigs this way, but, as other insect-eating birds were in the same aviary, it was necessary to hang an extra nesting basket in the alcove where the Chaffinches were nesting. The extra nesting basket was used as a feeding pan, and only the nesting Chaffinches were able to feed from this basket. The parent birds seemed to welcome my interest in their nesting operations. I could examine the chicks and the parent birds would continue to feed before I was out of the aviary. Their joy was evident when a spider or a daddy-longlegs was

left with a supply of earwigs. I have never known them feed their young on anything but insects.

The first eggs I ever had from Yellow Buntings were forsaken before the clutch was complete: this happened because I was curious enough, and foolish enough, to try to make the site more secluded. They made no other attempt to nest that year. On another occasion a full clutch of eggs were deserted because I was curious enough to have a peep, after they had been incubating for eight days. On the last occasion three chicks hatched out and lived for seven days. I dare not risk trying to provide extra food in the same way as the Chaffinches were supplied; therefore the Buntings could not get enough of the required food to feed and rear a brood of three. In the same aviary were a pair each of Chaffinches, Reed Buntings, and Indian Buntings. The Reed and Yellow Buntings do not agree in the breeding season, in an aviary. The Buntings built their nest between two old tree stumps, only a few inches from the ground.

Control breeding does not appeal to me, half the charm is lost by this method, and the chances are, to my way of thinking, almost as heavily handicapped. In a small aviary, either the urge does not last long enough for successful rearing, or the birds become bored, and so develop unnatural habits, such as floor laying, egg breaking, egg eating, or chicks thrown out of the nest. A healthy brawl with a neighbour seems to inspire the birds to carry on. If a cock Finch can defend his nest against something tangible, the breeding urge will last, but when there is little space to afford interest, and no other birds for him to drive away, he is likely to get bored, or have a "brain-storm". The confirmed "control breeder" cannot be expected to take this summing-up seriously. I can only state that I have seen British Finches act in the way mentioned. The Goldfinch especially loves to quarrel and bicker at such times, but if he has nothing to do except guard his hen from nothing, then he is likely to become unconventional.

AN UNSCIENTIFIC ACCOUNT OF THE IXTH INTERNATIONAL ORNITHOLOGICAL CONGRESS

I greatly hoped that a more scientific and experienced pen would have been employed on this task, but this hope having proved vain, I must do the best I can and ask my readers to be indulgent.

We met in Rouen on the 8th May and were instructed to betake ourselves to the Secrétariat to be registered members of the Congress and receive our badges—very pretty little medallions adorned with a pink Flamingo.

On the 9th the Congress was formally opened at the Hôtel de Ville and in the evening there was a reception at the same place.

On the 10th we were shown some most interesting films, one of which by Professor A. Allen, of the Cornell University American Museum of Natural History, not only showed us pictures and movements of rare and disappearing American birds but gave their voices and calls.

In the afternoon we were assembled in order to have our photographs taken, and later were invited to the Celebration of the Centenary of the Jardin des Plantes followed by a garden party at the Orangery. This was extremely interesting as we were shown the hot houses as well as the garden where were many rare plants. The garden is very well kept, and boasts some fine trees; I was particularly struck with a magnificent row of horse-chestnut trees, the highest I have ever seen, and covered with bloom. Serins were seen and heard among the trees. At night the Cathedral, St. Ouen Church, and the Palais de Justice were flood-lighted, the effect was magical in its beauty.

The 11th will always be remembered as the day of the garden party at Clères. Madame and Monsieur Delacour most hospitably invited us all to see the wonderful collection of birds in their beautiful grounds, and gave us a bountiful tea. To see so many birds at liberty, Ducks, Cranes, Flamingos, and Scarlet Ibises in full colour, feeding and disporting themselves, gave me and, I do not doubt, all of us, the most exquisite pleasure. The collection of tropical birds in the hot houses,

comprising Humming Birds, Fairy Blue Birds, Sun Birds, Cocks of the Rock, and many others all in perfect condition and health showed what could be done by means of moist heat.

On the 12th we were taken for a long drive in the lovely valley of the Seine, through the Forest of Bretonne, Mauny and Roches d'Orivel. These forests, nearly all beech, just then in their freshest green, are extremely beautiful, but not very prolific in bird life. It must be owned, however, that an invasion of from fifty to sixty people, all talking, was not exactly calculated to encourage birds to show themselves !

The noteworthy events were the sight of a Goshawk on her nest which was shown us by the Foresters, finding a Stone Curlew's nest on an open heath, and a couple of small birds' nests.

In the evening the town gave us a magnificent banquet, followed by speeches from the President, Professor Ghigi, and the Mayor of Rouen and others.

On the 13th we saw more films : a wonderful slow motion of a Humming Bird's flight showing the movement of the wings ; Captain Knight's " Something New of Africa ", Secretary Birds, Crowned Eagles, and Hammerheads nesting and feeding young ; the display of the Great Bustard and, perhaps the best of all, Herr Siewert's " Year in the Life of an Elk ", which not only showed us these magnificent creatures in their homes, and as they have their being, but included the birds to be found there, a Bittern with her nest, Black Storks, and others. A really marvellous achievement. The same afternoon Captain Sutton gave a lecture on birds he had seen during his recent expedition in Mexico, very beautifully painted from life by himself. These showed many birds which were practically unknown to ornithologists.

Dr. Chapin gave us an account of his newly discovered African Peacock and encouraged us to hope that it may be seen in this country before many years have passed, as it should not be difficult to rear.

This brought the first part of the Congress to its close. We left hospitable, charming Rouen with regret, feeling very grateful for the kindness shown us, and repaired to Paris, where on the 14th May we were received by the Director and Professors of the Museum at the Galerie de Botanique ; on the 15th we were shown round the Zoological

Park at Vincennes, and were enchanted by the perfection of the arrangements for the comfort of the animals and their first-rate condition—the giraffes especially, and the bears. We saw the kitchen, beautifully clean and well arranged, and the stores of food and provisions for the animals. Really a model zoo.

Then came one more reception at the close of the Congress.

It should be noticed and will be to the gratification of our Members that the President of the Congress, Professor Ghigi, and of course Monsieur Delacour, the Secretary, are eminent Members of the Avicultural Society. Aviculture, indeed, was much to the fore. Mr. Sibley's lecture on "Hybridization of American Ducks" and Mr. L. S. Crandall's on "Display Forms of Birds of Paradise"; Dr. Lorenz's amusing film on the Psychology of the Grey Goose, and Dr. Stolpe's "Flight of Humming Birds", already mentioned, were all thoroughly avicultural.

I cannot close this account without saying how much we all owe to Monsieur Delacour. In spite of grave anxiety and much extra work through the serious illness of Mr. Fooks, he was always with us, kind, patient, and most capable, without him the Congress would not have been anything like the success it undoubtedly was.

E. F. C.

CURIOUS BEHAVIOUR OF BREEDING JACKDAWS

By RICHARD JAMES

Having taken a lively interest in the activities of a fellow fancier, I think an account of the said fancier's experiences with Jackdaws may interest others, especially those interested in the group of which the Jackdaw is a member. I do not know of one authentic instance "on record" where the Jackdaw has been bred in captivity. The said fancier is Mr. Conant, of Rickmansworth.

Mr. Conant is not yet a member of the Avicultural Society. The

methods adopted by this fancier are by no means orthodox, which makes many of his achievements all the more remarkable. However, Mr. Conant has kept a film record of some of his experiments, which leaves no room for doubt, otherwise some of the stories would sound rather fantastic to most of us.

The Jackdaws in question are hand-reared, 1935 birds. Two hens from one nest and one male from another district. All three birds are housed in an aviary, some 30 feet long, 12 feet wide, and 9 feet high. At each end of the aviary is fixed a box, near the roof, about 18 inches square, with a round hole cut out of one side of each box, the hole being 6 inches in diameter. In the spring of 1936 the cock bird mated with one hen, and has at all times refused to mate with the spare hen, in spite of repeated invitation to do so. A rough nest was built by the mated pair—the cock finding most of the material, the hen would discard anything she considered unsuitable. The owner of the birds, acting on advice, removed the spare hen, after which all nesting operations were discontinued and the nest was destroyed by the mated pair. The spare hen was then returned to the aviary. The mated pair then built another nest, and five eggs duly appeared, the eggs were incubated (chiefly by the hen), for a week, and then the eggs disappeared, it was thought the Jackdaws had eaten the eggs.

In the spring of 1937 the same birds built another nest, in the same box, and again the spare hen was taken to another aviary ; as a result, nesting operations again discontinued, and nest destroyed.

The spare hen was again returned to the Jackdaw aviary, nesting operations were then resumed, and a clutch of eggs duly appeared. A strict watch was kept as incubation proceeded, the eggs began to disappear, and it was found that rats were the culprits. This must have happened in the night, and it seems the Jackdaws would repair the nest in the morning, and continue to incubate what eggs were left. All eggs disappeared eventually, and so another season was lost. The following autumn the aviary was reconstructed and made rat-proof. The spare hen was kept with the mated pair the whole time after this, and a nest was built again in the spring of 1938, and six eggs were counted on the 22nd April. The nest was again examined on the 14th May, when seven eggs were counted. On the 16th May it was

found the eggs had began to hatch ; it is not known how many chicks there are. It is hoped that Dr. Hopkinson can be persuaded to visit, examine, and then report, but this must wait until Mr. Conant can reasonably expect to rear the birds to maturity. After which, I feel sure, a complete account—giving all detail—would be welcomed for publication in the AVICULTURAL MAGAZINE. The male Jackdaw will thrash the spare hen when she calls for a mate, at other times they are a happy family.

MACAWS BRED IN CONFINEMENT. II

By Dr. E. HOPKINSON

Thanks to Mons. Delacour and others I can now amplify the list of Macaws bred in confinement, which appeared on p. 88 of the Magazine, and at the same time regret my slip about the red *Aras*. I always do (and probably shall) confuse these two names, and should rather call *macao* the Scarlet Macaw and *chloroptera*, the Green-winged. However, that is by the way, and only shows that nomenclature can be another pitfall into which one can easily fall, for not only has the present writer fallen heavily, but the same has happened to the corrector, for in his notes "Red and Blue Macaw" appears for both the birds.

In the following list, a summary (as abbreviated as possible), the Latin names, about which there is more certainty, are given first place, and I hope that now the list is more or less correct, but further corrections and additions will be gratefully accepted.

Ara ararauna, Blue and Yellow Macaw. Records, 1818–1822, France ; 1900 (c.), 1931, Germany ; 1926–1935, Australia. *Hybrids*, *A. ararauna* × *macao*. California, 1936, *teste* Delacour, AVICULTURAL MAGAZINE, 1937, 138 ; 1938, 121.

A. ararauna × *chloroptera*. Dresden, 1897, *teste* Neunzig ; Bell, England, 1937, *teste* A. Silver *in lit.* ; Tuke, Ilford, *teste* Seth-Smith, AVICULTURAL MAGAZINE, 1938, 30.

A. macao, Scarlet Macaw. This was the Macaw bred at liberty at Lilford (NOT *chloroptera*), teste Delacour. Also a bare record in the U.S.A. before 1932. *Hybrids*, *macao* × *militaris*. Italy about 1900.

A. chloroptera, Green-winged Macaw. Hybrids only : *A. chloroptera* × *ararauna*, New Zealand, 1930-6.

A. militaris. Hybrids only (*macao* × *militaris*).

A. maracana, Illiger's Macaw. Zoo, 1931. Also a much earlier record in Germany, but a weak one.

ORNAMENTAL PHEASANT SOCIETY NOTES

By JEROME LAMBERT

I can now officially announce that the O.P.S. summer general meeting will take place on Thursday, 21st July, at the offices of the London Zoological Society. Our meeting will be held at 11 a.m. in the morning and this will be followed by a luncheon in the Zoological Gardens. Members of the Avicultural Society will now probably know that an Avicultural Society general meeting will be held on the same day but in the afternoon. It is hoped that by holding the two meetings on the same day many members of both Societies will be inconvenienced. I am convinced that all members of the O.P.S. who are members of the Avicultural Society will attend both meetings and I am hoping that at the O.P.S. meeting I shall have the pleasure of taking some names of our members who wish to join the Avicultural Society. There is no nomination required for membership of the O.P.S. and so I anticipate that some members of the Avicultural Society may feel inclined to attend our meeting in the morning and join at the same time. I will mention that the subscription is a modest 6s. per annum and the two half-yearly journals are inclusive of this sum, surely good value for money if one takes into consideration the fact that the world's leading phasianists contribute to the pages and

also we publish two coloured plates with each publication. The Secretary of the American O.P.S., Mr. C. Sibley, is at present in this country and I shall have the pleasure of meeting him before these notes are printed. We intend to exchange notes and we are both confident that our Societies will benefit by such conversations. The American phasianists have not rallied to this society as Mr. Sibley had hoped. In a recent issue of the American *Modern Gamebreeding* (the organ of the O.P.S.) Mr. Sibley made a most pleading appeal for more support. My father, stirred by this appeal, wrote some of his friends and will have the pleasure of informing Mr. Sibley that he has secured fifteen new members for the American O.P.S., rather good going that. For the benefit of readers of these notes I will mention that the subscription to this O.P.S. is 10s. per annum and for this sum their splendid year book is sent out and also every month the *Modern Gamebreeding*. This is a splendid magazine and deals not only with aviary birds but all varieties of sport such as shooting, fishing, etc. It is possible, in fact probable, that some of my readers may care to join and if so I shall be most pleased to receive the subscription and pass it on to Mr. Sibley. I can also forward a sample copy of the paper just mentioned, and if anyone cares to send me a card I will post one by return. In this manner I hope to be able to gladden the heart of Mr. Sibley. He is an untiring worker and deserves a much larger membership. Will you help him to carry on ?

LECKFORD AVIARY JOTTINGS

My jottings last month said that the Mexican Sandhill Cranes had gone to nest and were sitting. The first chick hatched out on the 30th April and the other one twenty-four hours later, nice strong little birds covered with bright foxy red down, with long pink legs and necks, and a very alert inquiring expression in their round bright eyes. The old birds were and are most attentive to them, fed them assiduously, and brooded them at intervals during the day as well as

at night. A store of well-cleaned gentles was in readiness, and on these and finely-chopped bullock's heart the babies thrive and grew apace. They were quick to learn how to pick up food for themselves in addition to all the insects and other titbits supplied by their parents. Nor were they long in displaying something of the family temper, for when the elder chick was three days old its mother accidentally brushed against it and toppled it over. As soon as it had righted itself it turned on the younger chick and pecked it viciously until their mother firmly sat down on both of them.

As a rule each old bird takes charge of one chick—I do not know if it is always the same one, I fancy not ; but it is difficult to tell them apart.

Pheasants have laid well, but a considerable percentage of their eggs are infertile. This, I understand, has been the common experience this year, perhaps the abnormal weather accounts for it ? The chicks that have hatched seem vigorous. Imperial Pheasants produced many eggs but all infertile, though the birds look to be in the best of health and condition. Scintillans is another failure : all his bluster and fury have not produced one fertile egg, but unabashed he still challenges all and sundry.

The Orinoco Geese only gave us one gosling, a pretty little black and white thing which lived but twenty-four hours, and whose corpse was gratefully accepted by the South Kensington Museum bird department.

They are laying again and may do better this time. Ashy-headed and Emperor Geese both have eggs and a mixed collection of Ducks' eggs is gathered daily. Rooks were a menace, even taking eggs out of the nest-boxes until one or two paid the penalty and were hung up as a warning to evildoers.

The Blue Crossoptilons laid a vast number of eggs in a common nest with what result remains to be seen ; they are masterful termagants who believe in keeping their husbands in subjection and live up to their theories. The surprising thing is that the husbands, though armed with good sharp spurs, are magnanimous or chicken-hearted enough to put up with this treatment.

E. F. C.

WADERS, ETC.

By A. F. MOODY

In reply to Mr. James' recent articles in the AVICULTURAL MAGAZINE referring to Waders and the rearing of our commoner British birds, may I as an aviculturist and a keen lover of birds in the wild, say that for upwards of thirty years I have never been without several species of Waders ; that as a group they are charming birds to study and not difficult to keep. Real success, however, as with many other families of birds, depends largely upon their owners' ornithological knowledge and a readiness to make the best of artificial conditions and render their immediate surroundings as natural as possible.

Great pleasure also can be derived from the keeping and breeding of quite common British Finches, etc. At one time and another I have kept various common species ; our usual procedure being to enjoy the pleasure (take notes, etc.) of rearing a species once, then liberate parents and young the first autumn or the following spring.

As of possible interest I append extracts from my diaries for 1907, 1909, and 1911, dealing with the rearing of three well-known species in the Scampston Hall aviaries.

BRAMBLING (*Fringilla montifringilla*).—The species has but once had an opportunity of nesting here, when, during the summer of 1907, the following observations were taken from a very ragged male (a dealer's bird) and a fine locally-caught female of the previous autumn. 30th May : About this time the male completed his nuptial dress, began to sing and otherwise behave as a breeding bird. 1st July : The pair began to build, choosing as a nesting site an old and partly decayed Blackbird's nest which had the year previously been stuffed into a growing hawthorn bush, at a height of about 4 feet from the ground.

6th July : Nest completed, in appearance very Chaffinch-like, differing only in being slightly larger and not so compact. 7th July : The first of a clutch of five very Chaffinch-like eggs laid. 11th July : Incubation appeared to commence. 2nd August : Two young males

left the nest. These were successfully reared, and rapidly assumed a plumage not unlike the adult in winter dress.

Nestlings.—Covered with dull whitish down. Four hatched, two of which died at an early age.

SISKIN (*Chrysomitris spinus*).—From a pair which enjoyed the range of a roomy aviary, two broods—a four and a three were reared in 1909. Nest, rather like that of the Spotted Flycatcher, built in yew bushes at a height of about 6 feet from the ground. Eggs, five and four in number; incubation, thirteen to fourteen days. It was observed that the broods left the nest on the thirteenth and fourteenth day respectively, and that on the date when the first brood left the nest, 10th August, the female ceased to assist the male to feed the first brood, and commenced to sit upon a second clutch of eggs.

The young males on leaving the nest differed from the females by showing a greater amount of yellow in their plumage.

BULLFINCH (*Pyrrhula europæa*).—1911. A pair of Bullfinches were given an opportunity of nesting. Being hand-reared examples of the previous season, they were very tame and confiding. At the same time they proved most indifferent breeders, or rather, I should say, rearers, for although several typical nests were built and young hatched on two or three occasions, they only succeeded in rearing two young (a pair) late in the season, after having neglected the previous broods. As to the behaviour, etc., of the birds at the nest: It was observed that an average nest occupied four days in building; that both took an equal share in the labour, and at intervals sat in the nest before the eggs were laid; after which the female only incubated. The eggs were laid on successive days, roughly about 8 a.m. Incubation in the only timed instance lasted thirteen days, the young leaving the nest on the thirteenth and fourteenth day.

All the species mentioned reared, the parents having access to a mixed seed pan, a frequently renewed bunch of weeds containing half-ripened seed heads, and such insects as they could procure.

CORRESPONDENCE

MADAM,—For a bird to display when suffering from a fatal illness is, of course, a very rare phenomenon and it is indeed strange that it should ever occur at all. Until recently I had observed it only in two species—Princess of Wales' Parrakeet and Banksian Cockatoo. A tame male of the latter displayed slightly to a gardener to whom he was very devoted, when the latter paid him a visit.

Sick Princess of Wales' Parrakeets I have known to display both to their mates and, when tame, to human friends. I once had a pair of Princess of Wales' ill at the same time and, when they met in the hospital, they displayed to each other, a rather pathetic sight as it proved to be the cock's farewell, for he died a few days later.

Recently a New Guinea King Parrakeet qualified for a place on the list of heroic invalids. He was suffering from catarrh and cirrhosis of the liver and was ill for some weeks, but almost up to the last he would display to a woman visitor. His courtesy in dire adversity was all the more strange in that the species is one of the most morose of Parrakeets. The Banksian is a born gentleman and the Princess of Wales a born philanderer, but the Salwatty King has no manners at all for his own kind and habitually greets even his wife with an open beak and a volley of bad language.

Yours very truly,

TAVISTOCK.

MADAM,—Replying to Dr. W. L. English's note on the Kea Parrot, it would, perhaps, be of interest to compare our experience of a pair of *N. notabilis* in Dr. J. M. Derscheid's collection, especially as it differs widely in several respects.

Our Keas were very shy, retiring to the darkest corners of the shelter on catching sight of anyone, and it was only on account of their great fondness for mealworms that we were able to gain their confidence: the cock will now take mealworms from us at the front of the aviary and is often waiting there for more, but the hen will not, as yet, come within 6 feet.

This pair will quickly destroy perches or any exposed woodwork in the aviary and it is evident that their beaks are extremely strong and sharp.

The feet certainly appear to be rather weak and no more capable of effective grasping than are those of the Cyanorhamphus Parrakeets, which, in general formation, they rather resemble; but the beak, though hardly suited to cracking hard nuts, would, I think, be easily capable of making a deep incision, and I consider that the Kea would find it much more difficult to cling to the back of a frantic sheep than to tear the hide and flesh.

These birds do not, I believe, readily bite when handled: they seem to be too intelligent to be easily panic-stricken.

A few days ago our pair somehow caught a Sparrow on the roof of the aviary and pulled it through the wire-netting; they appeared to have eaten most of it, for the total amount of wreckage we found was far less than the bulk of a Sparrow.

The Keas are extremely amusing and are great personalities, making by comparison most other Parrots appear quite characterless.

J. J. YEALLAND.

ARMENDY,
STERREBEEK (BRABANT),
BELGIUM.

DEAR SIR,—In reply to your inquiry in the AVICULTURAL MAGAZINE. Your bird must be *Lophospingus pusillus* from Argentina. A lot arrived about September last and Palmer, the dealer near the Zoo, had all or most. A first arrival. He (or friends) called them "Palmer Finches" (sometimes even "Huntley and Palmer Finches"). Brabourne and Chubb gives them the English name of "Black-crested Finch", but that is a name of no standing, for no one who wants English names like bird-fanciers had ever seen them before. However, it will do as well as anything else. As regards sex difference, the B.M. Catalogue only says that the female is similar but slightly smaller.

I hope your "Corbatitas" will arrive safely. I shall be interested to hear what they are in case they are a rare *Sporophila* (almost sure to be one of that genus). They are certainly not "Bib Finches". They come from Madagascar.

I send this answer direct as you probably would like it before the Magazine comes out, but you might let the Editress know that I identify them as above.

I have seen two or three in friends' collections. They appear reasonably hardy, and do chiefly on the usual seed plus plenty of green grass.

Yours truly,
(Dr.) E. HOPKINSON.

DEAR SIR,—I am much obliged to you for the trouble you have taken in replying to my inquiry in the AVICULTURAL MAGAZINE as to the identity of the little "Black-crested Finch" I lately purchased and which, I am glad to say, is doing very well: he has come into nice feather and is now very tame, being quite content with a plain seed diet and a supply of flowering grass, which, I agree with you, is a valuable, in fact the natural, food for many small Finches. He also likes a mealworm now and then.

I think the term "Black-crested" should stand for this elegant little bird, since the crest is his really very marked feature and, as far as I know, there is no other small bird which, proportionately, has one so long and graceful.

I see he comes from the Argentine, home of many beautiful birds, some of which (fortunately, perhaps) are, I know, rarely or never brought over; but though I resided for some twenty years in the River Plate countries, I never came across him.

My "Corbatitas" duly arrived, two very sorry little scrubs, but they are picking up and moulting out nicely, April-May corresponding, of course,

to autumn in their native land. Out there they are common enough and cost but a trifle, though I do not remember having seen them in England, and they could only be rare in the sense that they are seldom imported, perhaps because they are unattractive in coloration.

They are chubby, blunt-billed birds, of about the size and type, I think, of the "Cuba" Finch: the female is of a dull olive grey throughout, without markings, and the male generally of a dullish black, darker on the head, and having a little black "cravat" bordered with white and then a broad band of black across the breast, the rest of the under parts being light grey: he has none of the greenish tinge of the female.

So far, they eat only canary seed—and flowering grass—exception made of a ripe grape, which many Finches, even Canaries, I find get very fond of.

I might add that the friend who brought them over very kindly, by way of a surprise, added two "Superb" Tanagers which arrived in nice condition, and (to my chagrin) tried to bring besides from Brazil two Scarlet Tanagers and two, different, Hang-nests, but he not being an "expert" the poor things shared the fate of so many beautiful birds bought by passengers and put on board without proper food supply and in the flimsy, open bamboo cages which, in the tropics, seem adequate, on shore. Modern motor-ships too are very "cold" down below, compared with the old steam vessels, when once they pass the warm latitudes. I have told my friend "Never, never again!" unless with an adequate travelling-cage, such as the Finches and "Superbs" occupied.

I will pass on your letter to the Editress of the AVICULTURAL MAGAZINE, and thanking you again for the information you have given me, I am,

Yours faithfully,

H. C. MARTIN.

PS.—I may say that I found the Crested Finch at Gamage's and could not resist buying the last but one: I note that Palmer's had some too, at about the same time, so they will probably come again.

REVIEW

BIRDS OF CANADA. By P. A. TAVERNER. Published by John Murray, Albermarle Street, London, W. 1. 18s. net.

This large handsome volume deals with all kinds of birds known to occur in Canada, with the purpose of awakening and stimulating interest in their study and to assist in identifying native species, and certainly anyone who makes this book his companion can claim more than a nodding acquaintance with them.

The numerous coloured plates are by the Museum's bird artist, Allan Brooks, the text-figures with few exceptions are from the pen of the author, P. A. Taverner.

A lengthy and very clearly written "introduction" is followed by an illustrated "key" to enable students to determine the species of any bird they may come across. Following on this we have the description of all species found in Canada with small illustrations in the text, the name in French as well as in English, distinctions, field works, nesting, and distribution, the economic status, food and habits, and whether in need of and deserving protection. The index is in English and French, and another to check list numbers, in short no pains have been spared to make the book useful and attractive to the student as well as the man who without specializing likes to know something of the birds he comes across in his daily life.

The only objection to the book is its size and weight, which render it a formidable addition to one's luggage if travelling, and altogether impossible to carry about on bird-watching expeditions. Perhaps when another edition is called for it would be possible to split the book into two or even three parts for convenience' sake. As it stands it is a volume to adorn the bookshelf and one which every Canadian should be proud to possess.

E. F. C.

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- Mrs. AUSTIN WALTER, The Nunnery, Penshurst, Kent. Proposed by Dr. Bernard E. Potter.
- Most Hon. The Marquis YAMASHINA, 49 Nampoedai-Machi, Shibuya-Ku, Tokyo, Japan. Proposed by The Marquess Hachisuka.

NEW MEMBERS

- Mrs. D. ELTON COTTON, "The Nest," 9 Beechwood Gardens, South Harrow, Middlesex.
- LORD SYSONBY, Great Tangley Manor, Guildford, Surrey.
- ARTURO TUIS, Wien XIII, Stadlergasse 17, Vienna.

MEMBERS' ADVERTISEMENTS

The charge for Members' advertisements is ONE PENNY PER WORD. Payment must accompany the advertisement, which must be sent on or before the 20th of the month to Mr. T. H. NEWMAN, 46 FORTY AVENUE, WEMBLEY PARK, MIDDLESEX. All members of the Society are entitled to use this column, but the Council reserves the right to refuse any advertisement they consider unsuitable.

SALE AND EXCHANGE

I CAN offer many species of Ornamental Pheasants, including 1937 Satyr Tragopans, Mikado, Brown Crossoptilon, Elliot's, White-crested and Nepal Kaleege, Vieillot Firebacks and other rare Pheasants; also varieties in Waders. Please write for prices and particulars.—LAMBERT, Nawton, Yorks.

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THE ANNUAL GARDEN PARTY

to which all members are invited, will take place in the Zoological Gardens, London, on Thursday, 21st July. Tea in the Fellows' Pavilion at 4.30 p.m.

Members intending to be present are requested to notify the Hon. Secretary, 86 Regent's Park Road, N.W. 1.

VISIT TO LECKFORD

Mr. and Mrs. J. Spedan Lewis have invited all members of the Avicultural Society to lunch and tea and visit the aviaries on Saturday, 23rd July.

Train leaves Waterloo at 10.54 a.m., arrives Andover Junction at 12.51.

Return train leaves Andover Junction at 7.2, reaches Waterloo at 8.38 (restaurant car).

Return fare 11/8, third class.

Members intending to be present MUST notify Miss Knobel, 86 Regent's Park Road, N.W. 1, not later than THURSDAY, 14th JULY.



THE AVICULTURAL MAGAZINE



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THE AVICULTURAL SOCIETY

FOUNDED 1894

NOTICE TO MEMBERS

The Subscription to the Avicultural Society is £1 per annum, due on the 1st of January in each year, and is payable in advance. The entrance fee is 10/-. The *Avicultural Magazine* is sent free to members monthly. Members joining at any time during the year are entitled to the back numbers for the current year, on the payment of entrance fee and subscription.

**ALL SUBSCRIPTIONS SHOULD BE SENT TO THE HONORARY SECRETARY
AND TREASURER, MISS KNOBEL, 86 Regent's Park Road, London, N.W. 1.**

All Queries respecting Birds (except post-mortem cases) and all other correspondence should be sent to the Hon. Secretary at the above address. Any change of address should be notified to her.

POST-MORTEM EXAMINATIONS

Rule 1.—A short account of the illness should accompany the specimen. All birds to be sent as fresh as possible to Mr. C. H. Hicks, The Zoological Society of London, Regent's Park, London, N.W. 8.

Rule 2.—A stamped addressed envelope must be enclosed with the bird.

Rule 3.—No body or skin of any bird will be returned under any circumstances whatever.

The Magazine is published by Messrs. STEPHEN AUSTIN & SONS, 1 Fore Street, Hertford, to whom members should address all orders for extra copies, back numbers for 1917 and after, and bound volumes. Cases for binding the Magazine (in art cloth, with gold block on side) can be obtained from the Publishers, post free and carefully packed, at 3/- each; or the Publishers will undertake the binding of the Volume for 5/6, plus 9d. for packing and postage. Members are requested to state whether they want the wrappers and advertisements bound in at the end or not. Telephone: Hertford 546 and 547.

All communications intended for publication in the Magazine should be addressed to the Editor:—

MISS E. F. CHAWNER,
The White House,
Leckford,
Stockbridge,
Hants.



Bulwer's Pheasant (*Lophophanes inornatus*)
Cock Bird in Display.

THE AVICULTURAL MAGAZINE

THE JOURNAL OF THE
AVICULTURAL SOCIETY

Fifth Series.—Vol. III.—No. 7.—All rights reserved.

JULY, 1938.

THE PAIRING DISPLAY OF BULWER'S PHEASANT

(*Lobiophasis bulweri* Sharpe)

By O. HEINROTH

Reprinted from *Journal für Ornithologie*, 86, No. 1, 1938, by kind permission of the Author.

In the last few years a few Bulwer Pheasants of both sexes have reached Europe, first of all the London Zoological Gardens and the Pheasantry of J. Spedan Lewis near London, then M. J. Delacour at Clères, to the north of Paris. On 27th November, 1930, a cock not in plumage arrived at the Berlin Zoological Garden, which during the following summer assumed its gorgeous feathers and lived until the 21st July, 1932.

The species *Lobiophasis*, which only consists of one kind and is distributed over the interior of Borneo, resembles most closely the *Lophura*; in his monograph on Pheasants, vol. ii, pp. 146-165, Beebe has collected probably all that is known about their life in natural surroundings. According to his observations, the birds have two chicks which are accompanied by the parents. The cock, which is very conspicuous through its white tail, leaves the nest at the least alarm, whereas the insignificant chicks and hens remain motionless and quiet.

The shape and colour of the cock bird may be seen from the accompanying illustrations; besides the blue facial lobes the snow-white tail is particularly characteristic and on closer examination is remarkable in that it consists of 15 to 16 pairs of feathers, the largest number of any bird. According to Beebe, the hen has only 26 tail feathers and the cock when not in full plumage 24; the increase to 30–32 comes about by the middle upper tail covering growing into tail feathers. The outer 6–7 pairs are not tipped and have the appearance of being worn down; however, they are like this from the beginning, so that "they come into the world worn". I would class them as scraping feathers, for during pairing they are pressed against the ground as the bird moves forward and produce a rustling sound among the leaves. Beebe noticed that in the wild state dry leaves were actually impaled on these feathers.

In the autumn of 1930 the freshly plumaged cock-bird started to display (it was kept completely in the open air in a section of the Pheasantry together with some other Pheasants) and continued to do so until the cold weather set in, recommencing in the early spring. One yellow-tailed hen Pheasant (*Acomus erythrophthalmus* (Raffles)) attached herself to him and became the object of his attentions, but mating was, however, not observed and the hen laid no eggs. The cock moulted in the late autumn, when almost all the tail feathers fell, and about eight weeks later they had completely grown again.

Since the bird generally remained in the rear part of its enclosure and was often concealed under the leaves and grass, it was very difficult to photograph. The water-colour in my possession, which was painted by my wife, Käthe, formed the basis of the coloured plate and was itself reproduced from a photograph and also from my observations of the living bird. I can therefore vouch for its correctness, since I have very frequently seen the cock bird displaying. In the picture of the bird its lack of corpulence is quite correct, for it has an incredibly flat appearance which makes it difficult to ascertain the shape. It looks to a certain extent as if a large white disc had been inserted from behind into a plaquette, all detail being rather blurred. The right and left halves of the tail lie evenly on each other, which is rather strange, as one thinks involuntarily of the wheel-

shaped tail-spread of the Fantailed Pigeon. It is also contrary to one's conception of anatomy that the front edge of the tail should proceed along the back as far as behind the head.

The pictures in Beebe's work give an entirely wrong idea of the colour of the lobes ; when excited they are, strange to say, sky-blue, without any intermixture of wine-red colouring, and the upper portions deepen into a velvety black, in strong contrast with the white palette of the tail. In this condition the beak is not visible and the blue is only relieved by the ruby-red of the eye, which is particularly noticeable owing to its red surround. As a rule, when displaying, the bird struts slowly about and stands still with a jerk when the hen bird comes close up to him. It is then that the head lobes attain their maximum inflation.

The following results have been found anatomically: Only the middle tail feathers have grown into one with the bony pygostyle, the others being rooted in the strong muscles of the rump, so that during pairing display they can be pressed sideways and down hard on the ground. In flight only the inner tail feathers would seem to retain their roof-shaped position, and the others form a horizontal supporting surface as in the case of other gallinaceous birds. Stresemann makes the following observations in this connection: "The upper tail coverings quickly diminish outwardly in length, the upper layer of feathers of the sixth to the third tail feathers (from outside) is concealed under the . . . feathers of the back and 'therefore' not altogether white but of an inconspicuous brown colour. The first and second tail feathers (from outside) have absolutely no upper layer of feathers belonging to them. The lower set of tail covering feathers is completely lacking."

The internal composition of the head lobes was examined by Ad. Schneider immediately after the death of the cock-bird. Its dilation during pairing display is caused by the injection of blood and not by air being pumped in (cf. the work mentioned below).

When frightened, especially when its enclosure is intruded upon, the cock bird uttered a soft monotonous "Gack"; at the height of the pairing season it emitted a shrill, piercing cry, but otherwise was silent, having no call-note or crowing sound.

Beebe gives the weights of dead cock-birds as being from $2\frac{3}{4}$ to $3\frac{1}{4}$ lb., on an average therefore about $1\frac{1}{4}$ kg., corresponding to the weight

of an ordinary cock Pheasant (Game Pheasant). The body, which was very wasted at death, was not weighed; a post-mortem examination revealed tuberculosis.

MY BLACKCAPPED LORY

By ALEX HAMPE

When I receive our Magazine at the beginning of each month, my first look is always for articles describing the successful or unsuccessful breeding of a rare bird. Tastes differ, but I think a good many of our members share my opinion, and care less for articles on birds which are kept as pets.

I must therefore ask them to be lenient with me, when I write to-day a few lines about a bird which was purely a pet or rather a companion, to me.

Many years ago, on a hot, sultry afternoon, I was sitting in my office in Shanghai disgusted with the East and with the world in general. The thermometer registered 95 degrees in the shade, now and then a fine shower poured down, making tennis after office hours impossible, and the temperature felt like a hothouse. On days like these one hates the East, and longs for the cool mountains of one's home country.

I was just closing for the day, when the office boy entered and announced: "Master, birdman have come."

"Well, something interesting after all," I thought, when my faithful bird-dealer-friend came in and greeted me with his ever-pleasant smile. Koo's visits were always very welcome, for not only did they mean a pleasant chat, but as a rule also the arrival of some rare birds or animals in his shop in the native city. It is true that these rarities were not always suitable for me. On one occasion it was a colossal Chinese tiger which Koo offered to me, and another time when he had told me he had a very nice pair of small wild chickens, I found a pair of common Moorhens. But this time it was a new Parrot

which Koo wanted me to inspect. "Can he talk," I asked. "By and by," was Koo's reply, informing me that the parrot in question could not talk, but would certainly learn it, as all Parrots are supposed to do, which are offered to a purchaser in China.

To visit the native city on a hot sultry day is not a real pleasure, so I promised my man that I would come as soon as the weather was better. After a few days we had cooler and drier weather, and I hurried to my friend's shop, where I found the subject of our conversation on a wooden stand. If one finds a Parrot on such a stand on which they are brought from their native habitats, one can be almost sure that the bird is hand-reared and tame. But the Parrot did not look at all nice, his wings and his tail were cut, and his whole plumage was dirty and rough. I saw at once that I had a Lory before me, but could not feel sure which kind. Lories are charming birds, but their feeding and keeping entails a good deal more trouble than that of a seed-eating Parrot. As I had already about a dozen softbills to care for, I hesitated to buy the bird. Yet he seemed in good health and tame, and so I could not resist him, and after a little bargaining without which no deal in China can be completed, I got the treasure for the moderate sum of \$10.0, about one pound English money. Arrived at home I freed Polly from his coco-nut shackle and put him in a large bamboo cage. Then I fetched my "Reichenow", an excellent book to identify a bird. Soon I had found that my new acquisition was a black-capped Lory from Dutch New Guinea with the scientific name *Lorius viridicrissals*, not a common bird, anyhow. The next day I tried to make friends with Polly, but he would have nothing to do with me.

In the dealer's shop I could take him on my hand, but in the big cage without ring and chain, he retreated into the farthest corner. "Well, by and by we shall be friends," I thought, and I was certainly not disappointed. After about two weeks he approached me when feeding him, soon he tried to examine my hand, and after a month he had become the tamest and most intelligent bird I ever possessed. As soon as I opened his cage, he flew on my hand or shoulder, and the latter was for ever his favourite place. I often took him to the little garden in front of the house. Here he climbed and jumped about in

the trees, but soon he found it a dull game. Half flying half jumping, he reached the veranda. If he found me here sitting in my wicker chair, he was satisfied, was I not on the veranda he looked for me in the dining and sitting-room. If his search was here also vain, he flew through pantry and yard into the kitchen, where usually his second best friend, my Chinese servant, was busy, whose shoulder he now climbed eagerly. Even upstairs and downstairs he followed me. Sometimes when my messmate and myself were lying in our easy chairs on the veranda, both clad in white, Polly climbed by mistake my friend's chair. But at once he noticed his error, and quickly flew to me. Also in the evening after dinner he still wanted to be with me, and was often lying on his back in my lap.

Strangers, however, Polly did not like, and sometimes bit them severely, while I or my boy could do anything with him without ever being bitten. During the night his cage stood in my bedroom. As soon as my boy lifted the cover in the morning and opened the cage, Polly flew on my bed and played here with me like a little kitten. When I went to my bathroom, he followed me quickly and took a great interest in my toilet. When I was sitting in the bath, he flew on my hand and took from there a really good ablution. Bathing was altogether one of Polly's favourite pastimes. On the veranda he had a big tub in which he rolled and splashed daily to his heart's delight. Only on very cold days he missed his bath. Consequently he became a very beautiful bird. When he had been two months in my possession he went through a complete moult, and was now in full resplendence of wonderful colours of red, violet, ultramarine, and green. Without teaching him, he soon started to talk. Of course, he spoke his name, called my boy "Agar" mostly when he was hungry, and greeted me with "hallo" when I went to his cage. Often he said, with rather a deep voice, "Good, good Polly," and immediately afterwards imitating my boy, "so bad Polly." When I covered his cage for the night, one could hear "Sleep, Polly, sleep." He never slept on the perch, but always in a nesting box I had provided for him. Besides this, he laughed, whistled, imitated my Shama, and tried to accompany the gramophone in songs without words. Of other Parrots, Polly was very jealous, small Parakeets he did not mind, but as soon as I

tried to keep an Eclectus or another Lory, he got so excited that I had to refrain from having another Parrot. As food Polly had the usual mixture of Mellin's with condensed milk, besides bread and milk, and often a simple rice pudding, besides all fruit in season. This simple nourishment suited Polly evidently very well, for he was always in the best of condition and as lively as a cricket.

To my deep and everlasting regret, Polly had, like so many birds which are kept as pets, a sad end. I had been on long leave in Europe, and on my return was living in an hotel.

Soon the guests complained of the noise Polly made in the morning, and to avoid unpleasantness I took him to my office. Here he was liked by everybody. Many a hearty laugh I heard from my Chinese customers when in the middle of an animated conversation and bargaining, Polly shouted "Lalilung" (robber).

On a busy mail day, Polly sat on my shoulder as usual. I had to leave my little private office to fetch a book, and put Polly on the chair. I could not find the book, and Polly, missing me, flew into the general office in search of me.

But unfortunately he missed my shoulder and landed on the floor. At the same moment a strange cat appeared through the open door on the scene, and seized Polly. He gave a fearful screech, and the cat let him go. I carefully examined him, could not detect anything, and put him into his cage. But the next morning I found Polly on the bottom of the cage in a very bad condition. His whole head was swollen, evidently blood-poisoning had set in. I took him out, and he died in my hand.

You can imagine my feelings. I have possessed hundreds of birds, but never have I regretted the loss of one as much as that of my Lory. I tried to replace Polly, and had several Lories afterwards, Black-caps, Rubras, etc., but none could equal him, and he will never be forgotten.

THE PRESIDENT'S GARDEN PARTY

By N. WHARTON-TIGAR

Once more this most enjoyable day has come and gone. The weather this year decided to be tiresome. Why will people pray for rain, when we want to enjoy the sunshine ? However, as the happy party proceeded onwards from Hyde Park Corner to Foxwarren Park, the clouds began to lift, and the rain finally stopped ; and by the time we reached our destination the sun was shining.

After being cordially greeted by Mr. and Mrs. Ezra and family, we proceeded to inspect the aviaries, headed as usual by our host.

It was a cool day, and I think we all very much enjoyed the long ramble through the beautiful grounds seeing all the treasures of Mr. Ezra's unique collection. These are, as most of you know, under the very able care of Shearing, who has very kindly supplied me with some of the names of the varieties kept—not by any means all, as there are I believe over a thousand birds !

In the big flights so ideally planted with shrubs and containing large pools there are many Waders, etc., Stilts, Avocets, Water Thick-knees, Yellow, Yellow-wattled, White-fronted, Banded, Black-winged, Gaysons, Crowned and Blacksmith's Plovers, the last-named with two engaging little youngsters, the second year these have been bred.

Reeves and Ruffs, a never failing attraction to visitors with their amusing display, Curlews, Godwits, Oyster-catchers, Sun Bitterns. There is a wonderful collection of Pigeons and Doves, including Victoria, and Common Crowned, Crested, Bronzewings in several varieties, Papuan, Golden Heart, Bleeding Heart, and hybrids ; Snow, Pheasant-tailed, Triangular Spotted, Wonga-Wonga, White and Lilac Crowned, and several species of exquisite Fruit Pigeons. Doves include Tambourines, Emerald and Sapphire Spotted, Dwarf Turtle, Bartailed, Necklace, Jobi Island, White-fronted, Zebra, Imperial, Fruit, and Galapagos. Of Jays and Pies there are Eastern Blue, Stellas, Japanese, Loochoo, Formosan Blue, Yellow-billed, Blue Lanceolated ; these with Lort's and Broad-billed Rollers all in finest condition look

too wonderful flying about in the ideal surroundings, so do the Weavers and Wydahs, many of which were still in full colour, the Giants in two varieties were lovely ; also Grenadiers, Napoleon, Taha, Reichenow's, Cinnamon, Yellow-backed, Masked, Paradise, Red-shouldered, and Madagascar.

Other birds in these aviaries were various Bulbuls, Silver-eared Mesias, Laurina's Mesias Dyal Birds, and Shamas, Fairy Bluebirds, always lovely, Regent and Satin Bower-birds, Evening Grosbeaks, Hoopoes, Sulphury Water Tyrant, and the very graceful Fork-tailed Tyrant, I called it Scissor-tailed last year ! There are also beautiful Kingfishers, various Partridges including Roulroul, Madagascar, Mountain, and Californian ; also Chinese Painted Quail and numerous Waxbills and many kinds of small Finches including the rare Natterers Finch.

Mr. Ezra has a fine collection of Parakeets, many of them breeding ; there are two varieties of Ringnecks, the Green and the Yellow. Alexandrines, Yellow, Blue, and Green ; Layards, Malabars, Queen Alexandra most beautiful of all, Hooded, Elegant, Pennant, Mealey, Rosella, Barraband, Green-winged King, and Crimson-winged.

There is a fine pair of the rare Guilding's Amazon and a pair of the lovely Leadbeater's Cockatoo. In special aviaries for breeding there are pairs of Formosan Blue Pies, Hunting Cissas, Short-tailed Ant Thrushes, Racket-tailed Drongos, Dwarf Hermit Thrushes, Rothschild's Grackles (bred here already), pairs of Mountain and Western Bluebirds ; and in solitary splendour an Albino Carrion Crow.

After viewing and duly admiring this magnificent display of birds Mr. Ezra took us through some of the Crane enclosures ; besides a flock of the exquisite Demoiselles and many Sarus, he has the graceful Stanleys, the Manchurian, and others ; and he showed us with pride a pair of Mexican Sandhill Cranes, he had recently received as a present. I understand the Sarus nest away from home, what a lovely sight they must be flying !

We next visited the bird house where there were many rare birds including Paradise Tanagers, Bolivian Yellow-bellied Tanagers, Strickland's Shama, Macklots, and the Great China Pitta, the Lesser Bird of Paradise, and many others.

The visitors, among whom were many well-known people, were then asked to go indoors, where the usual sumptuous tea and refreshments were served, and much appreciated by all. Among the large gathering was a distinguished visitor from New York who came with Mrs. Seth-Smith, and Sir David Ezra over from India was one of the family circle.

After tea, I left to visit a friend, who lives not far away; but Mr. Terry Jones sent me the following notes of what took place when the waterfowl, etc., were inspected. He says, "The first birds I noticed were great numbers of wild Turtle Doves, and a lovely flock of domestic Pigeons, Croppers, and Polish Lynx given to Mrs. Ezra originally by Mr. Whitby. A Green-winged Trumpeter came running to see us. By the first pond were Chestnut-breasted Shelduck and Common Shelduck, Combduck, and on the pond were Bernicle Geese, Tufted Duck, and Pochard, and a pair of Black Swans. Lower down we met an Emperor Goose, grey, laced with dark grey, a white head and neck with a black throat. We saw the two types of specific Peafowl, one with blue neck and the other with a golden green neck. The Burmese and the Indo-Chinese I believe. The Madagascar White-backed Duck, a most curious Grebe-like bird without a trace of white on its back, is still thriving and breeding. I believe Mr. Ezra is the only one who breeds them. The Black-necked Swans had a brood. There was a pair of the lovely Eytons or Plumed Tree Duck, a very rare and beautiful bird, with long buff flank feathers, curling over its back like Japanese chrysanthemum petals. Other species seen were the Fulvous, Black-billed, Wandering, White-faced Java, White-winged Wood Ducks, Albina, Bahama, Pintail, Pigmy Teal; one very rare Pinkhead Duck. The whole head and neck is shell pink, the body a rich warm chocolate. Mandarin and Carolina were nesting in the trees and the Barheaded Goose was sitting in exactly the same spot as last year. The Orinoco Geese had a fine and healthy brood of nine I believe. We saw a flock of Flamingos on the grass. Also, I forgot to mention that while we were at the bottom, we saw two flocks, one of Ross' Snow Geese, and one of Red-breasted, both very lovely and very rare."

RIEFFER'S TANAGER

Psittaspiza riefferi

By P. H. MAXWELL

When the members of the Avicultural Society were very kindly invited to Forwarren Park, Cobham, Surrey, to see Mr. and Mrs. Ezra's wonderful bird collection, on 28th May, we saw a specimen of this bird recently brought home by Mr. Webb amongst the new animals. It is very seldom imported, but Mr. Goodfellow brought home some, or one for Mr. E. J. Brook. It is brilliant grass-green, upper wing-coverts brighter, lores, sides of face, chin, and lower part of the belly chestnut, bill orange, feet yellow; whole length 8 inches, wing 4·5, tail 3·5. The sexes are similar, but the female is smaller—it has the general structure of a *Saltator*, but the bill is shorter and the tail more squared. It builds a nest of considerable size, made of green moss, lined thickly within, on the outside prettily ornamented with long tapering green ferns.

Mr. T. K. Salmon, in his article on "Birds in the State of Antioquia, United States of Colombia," in the *Proceedings* of the Zoological Society of London, 1879, said he only found one egg in the nest of this bird, but he could not say whether this was always the case.

Besides the typical species there are two sub-races which inhabit Peruvian and Colombian Andes. This Tanager described inhabits chiefly the humid temperate zones, but is occasionally found in a sub-tropical zone. It is an inhabitant of Colombia and Ecuador.

NINTH INTERNATIONAL ORNITHOLOGICAL
CONGRESS

EXPEDITION TO THE CAMARGUE

Though for many the Ninth International Ornithological Congress, reported in the last number of the *AVICULTURAL MAGAZINE*, ended in Paris, a very large number of members took part in the excellently arranged expedition to the Camargue.

The party left Paris in the evening of Sunday, 15th May, still shepherded by Monsieur Jean Delacour, the indefatigable Secretary of the Congress, and arrived at 6.30 the next morning in Arles. At 9.30 the members of the Congress were received by the Mayor in the Town Hall where they were given a speech of welcome and champagne. After this the morning was spent in visiting the town and its many beautiful and interesting Roman buildings, most striking among these being the open-air theatre, where plays are still produced, and the large amphitheatre. In the afternoon the whole party was taken to Nîmes where the Natural History Museum was visited and an official welcome given by the Director. The party then drove to Aigues Mortes and finally a visit was made to the Petite Camargue to see a colony of Little Egrets, Night Herons, and Squacco Herons. The colony is situated in a wood in the sand dunes and as we approached all the birds rose into the air which made a wonderful sight. There were about 200 nests of Little Egrets and Night Herons and about six of the Squacco Heron. The wood was also full of Nightingales, all singing ; in fact this bird is a striking feature of the whole Camargue for wherever there is a suitable bush or tree a Nightingale is sure to be heard singing all day long.

All through the night a Scops Owl was calling from the trees just outside the hotel and at 6.30 the next morning the party started off in charabancs for the long excursion to the Grande Camargue, in torrential rain and a thunderstorm.

The whole Camargue is a wonderful place, triangular in shape, between the two arms of the Rhone as it branches before flowing into the Mediterranean, and it is probable that years ago it used to be a gulf, but has gradually silted up and formed a flat sandy area of very interesting country. There are a series of shallow brackish lakes, reed beds, marshland and sand dunes covered with bushes and coarse grass ; farther inland are sweet water lakes, low growing trees, woods, and agricultural land. This naturally suits all sorts of birds and is an excellent stopping place for migrants on their way north after crossing the Mediterranean ; also, of course, a great number remain to nest.

A large area has been established as a reserve, under the direction of Monsieur M. Tallon, by the Société Nationale d'Acclimatation de

France, of which Monsieur Jean Delacour is the President of the Ornithological Section.

All through the Camargue there are quite good roads between the lakes so the charabancs were able to proceed without difficulty. After travelling for about an hour a stop was made to see a herd of the bulls which inhabit the Camargue. These are used for specialized bull fights and are very fierce large black animals. They are looked after by "gardiens" who ride on white horses and look very picturesque in their large hats and white trousers, carrying long staves in their hands to control the bulls.

Fortunately the weather cleared and at the next stop, which was by a large lake, a magnificent flock of Flamingos was seen feeding in the water. Later a whole lot of these birds rose and flew in a long line one after each other, their dark pink and black wings and outstretched legs and necks against the blue sky making an absolutely unforgettable picture. The Flamingos visit the Camargue every year and the numbers seem to vary very much—sometimes it is as many as ten thousand. A few hundreds stay for the winter, but the majority go farther south. The nesting of the Flamingos in the Camargue seems somewhat of a mystery—they sometimes nest and bring up their young and then there are long periods of years during which no young are observed at all, but all the same the birds lay eggs. They apparently make no attempt at nest building but drop the eggs anywhere and then, naturally, they come to grief.

Purple Herons rose from the reed beds, Calandra Larks were seen occasionally, Cetti's Warblers were singing on all sides and the Great Reed Warbler was most in evidence of all. Avocets and Little Egrets were feeding by the lake-side and a good number of Black Terns were fishing. On the other side of the marsh a Marsh Harrier rose and swung slowly into the distance; the number of these birds in the Camargue is remarkable. Montagu and Hen Harriers were also seen, but in nothing approaching the numbers of the Marsh.

At midday when the watcher's house was reached, a lorry appeared, yet another example of the magnificent organization of the expedition, with dozens and dozens of carrier-bags in each of which was a bottle of wine and a large amount of food, which, as at ten o'clock everyone

had decided it must by then be lunch time, was highly approved. In a willow near the house a pair of Penduline Tits were completing a nest, and flying about the outhouses was a Collared Flycatcher. In the early afternoon nesting Stilts were visited and also the nest of a Marsh Harrier. Later, near another watcher's house, the nest of a Fantailed Warbler with young, a Spectacled Warbler's nest, and yet another Penduline Tit's nest, this time with young, were all seen within a small area. Flocks of Ruffs, the inevitable Marsh Harrier, and many other birds were observed even from the charabancs on the way back to Arles, where, after an unforgettable day, the party returned in the evening.

PHYLLIS BARCLAY-SMITH.

BREEDING RECORDS : SUMMARY

By DR. E. HOPKINSON

Since the appearance of *Records of Birds Bred in Captivity* in 1926 much more material has accumulated and here an attempt is made to provide a summary of all the records to date on the lines of Part III of the original work, that is, indicating the values of the various records by change of type. These values must necessarily differ as the sources of error are many—from simple mistakes in identification and observation down to downright mis-statements, as I fear many of the recent claims for success with British Birds must be considered. We are all familiar nowadays with the advertisements of aviary- (or cage-) bred Britishers, and I think nearly every possible British cage-bird has so appeared ; at any rate I have seen most, " A.B., C.R., etc.," even Nightingales and Long-tailed Tits, but surely the biscuit must be awarded to the advertiser (in January) of " Linnets : cage-bred, 1s. each, or 9s. a dozen if a quantity are taken ". Could anybody breed even white mice or cockroaches, keep them six months and then sell them at 9d. ? This sort of thing has naturally made one suspicious of all records, but that cannot be helped, and I am sure we can be certain that there are plenty of good records for a great number of birds including British.

Here the compiler gives his opinion of the values and hopes with help from others to amplify the records later on.

Towards an ideal record of the future successful breeders could give much help by telling us in each case :—

How many young birds left the nest ?

How many of these lived to moult ?

How many survived a year or longer ?

Did any of the young breed again ?

Except for Canaries, Budgerigars, and a few other species, I am afraid the answer to the last question would be “ *none* ” for the cage-birds proper, that is excluding Ducks, Game Birds, and the like. I fear too that in most cases the answers to the other questions would not be too encouraging.

No details are given here but perhaps I may mention that *Records* is still obtainable at 15s. by anyone sufficiently interested and that the publishers are Messrs. Witherby, High Holborn, London. It is on this that most of the present effort is based. Some fifty pages of additions appeared in the *MAGAZINE* in 1932–3 and those of more recent date are included here. Any information I have is at the service of anyone really interested.

The figures with each entry, and the letters for the hybrids are those of the original book. Capitals indicate that the species (or hybrid) has certainly been bred : large capitals that the record is self-sufficient, small ones that the actual breeding can be (at least in my opinion) taken as certain, but that further detail is desirable. When a name appears in ordinary print, it means that the record is not entirely satisfactory, when brackets enclose an entry it is considered at best doubtful, and when a query (?) is added real doubt is indicated, and more queries, more doubt.

FINCHES

1. GREENFINCH. Often bred, and also the Chinese and Algerian races, *C. c. sinica* and *C. c. aurantiventris*, as well as “ hybrids ” with the Japanese, *C. c. kawarhiba*.

Hybrids

a. GREENFINCH \times JAPANESE GREENFINCH, but this is not a real hybrid, but mating of two subspecies only. Real hybrids on record are with females of the b. (Chaffinch ?) ; c. BULLFINCH ; d. Himalayan Siskin, and further crosses ; f. g. : e. Sikhim Siskin ; h. CANARY ; commonly bred ; i. (Scarlet Rosefinch) ; j. Mexican Rosefinch.

Also the male Chinese Greenfinch with females of a. the Greenfinch (another *intra-species* union) ; b. GOLDFINCH and a further cross (c) ; d. Himalayan Siskin.

4. (Black-and-yellow Grosbeak, *Mycerobas melanocephalus*).

5. BLACK-TAILED HAWFINCH, *Eophona migratoria* Hartert. Two records : Germany, 1886 ; U.K., 1928.

6. HAWFINCH. One record, U.K., 1911. And a *hybrid* ? record. (Hawfinch \times Bullfinch, ? ?.)

7. Yellow-bellied Grosbeak, *Pheucticus chrysogaster*. One record : Scotland, 1916, but were the young reared to maturity ?

8. ROSE-BREASTED GROSBEEK.

9. Black-headed Grosbeak, *Hedymeles melanocephala*.

10. BLUE GROSBEEK, *Cyanocompsa cyanea*.

Lazuline Grosbeak, *C. parrellina*. One record : France.

11. Northern Blue Grosbeak, *Guiraca caerulea*.

12. ORANGE-BILLED SALTATOR. One record, 1921 ; *not* 1911 as in *Records*.

BLACK-THROATED SALTATOR, *S. aurantirostris*. One record, 1933, U.K.

13. WHITE-THROATED FINCH, *Sporophila albigularis*, and *hybrids* with the female GREY FINCH, 1914 (a).

14. GREY FINCH, *S. grisea*.

15. (Euler's Finch, *S. euleri* ?.)

16. (Collared Finch, *S. cucullata*.)

17. GUTTURAL FINCH. Two records, and *hybrids* with the hen White-throated Finch (a).

18. Plumbeous Finch.

19. BLACK SEED-FINCH, *Melopyrrha nigra*. One record, U.K., 1914.

20. TROPICAL SEED-FINCH, *Oryzoborus angolensis*. One record : Holland, 1917.

21. OLIVE CUBA FINCH, *Tiaris olivacea*.
22. (Little Finch, *T. o. pusilla*.)
23. CUBA FINCH, *T. canora*.
24. DUSKY FINCH, *T. bicolor* (late *zena*). One record : 1910.
25. JACARINI FINCH.
26. RED CARDINAL and *hybrids* with the females of a. the Green Cardinal, and b. the Grey.
27. BLUE CHAFFINCH, *F. teydea*. One record, 1905, U.K.
28. CHAFFINCH and *hybrids* with females of the a. Greenfinch ;
- b. BRAMBLING ; and (Canary ?).
29. BRAMBLING and *hybrids* : BRAMBLING \times CHAFFINCH.
30. Snow-Finch.
31. GOLDFINCH and *hybrids* with females of the a. Eastern Goldfinch ; b. GREENFINCH ; c. Japanese Greenfinch ; d. (Chaffinch) ;
- e. SISKIN ; f. Himalayan Siskin ; g. Twite ; h. Linnet ; i. Lesser Redpoll ; l. CANARY : common ; and k. BULLFINCH.
32. (Eastern Goldfinch. A *hybrid* record only with the male Goldfinch.)
33. SISKIN and *hybrids* with hens of the following : Black-marked Siskin : Switzerland, 1926 ; a. Greenfinch ; b. Goldfinch ; c. Twite ;
- d. Linnet ; e. " a Seed-eater " (*flaviventris*, *sulphuratus*, or *icterus*) ;
- f. CANARY ; g. Bullfinch.
34. CITRIL FINCH. One record, U.K., and a *hybrid* with the hen Canary.
35. RED SISKIN, and *hybrids* \times CANARY and further crosses.
36. Sikhim Siskin, *Spinus tibetanus*.
37. BLACK-HEADED SISKIN, *S. ictericus*, and *hybrids* with females of the a. SISKIN, b. Canary, and c. (Cape Canary ?).
38. Black-chinned Siskin, *S. barbatus*.
- Black Siskin, *S. atratus*, and *hybrids* with the hen Canary.
39. BLACK-MARKED SISKIN, *S. notatus*. One record abroad ; and *hybrids* with the hen Canary, abroad.
40. YELLOW-RUMPED SISKIN, *S. uropygialis*. One record : Germany.
41. (Totta Siskin. *Hybrid records only*.) a. Totta \times CANARY ;
- b. Totta \times Cape Canary.
42. (American Siskin). *Hybrids* with the hen CANARY only.

43. HIMALAYAN SISKIN, *Hypacanthis spinoides*. *Hybrids* with a. the hen GREENFINCH and a further cross (b), and with the hen Canary (c).

44. Twite and *hybrids* with females of the a. Greenfinch, b. Goldfinch, c. Siskin (one recently exhibited, 1937), and d. CANARY.

45. LINNET, and *hybrids* with females of the a. Greenfinch, b. Goldfinch, c. Twite, d. Grey Singing Finch, GREEN SINGING FINCH, 1928, e. CANARY (common), f. Serin, g. BULLFINCH, and h. (Cut-throat ? ? ?).

46. MEALY REDPOLL, and *hybrids* with the hen CANARY (a), and hen Bullfinch (b).

47. Hornemann's Redpoll. One record : abroad.

48. LESSER REDPOLL, and *hybrids* with females of the a. GREENFINCH, b. Goldfinch, c. Siskin, d. TWITE, e. (Linnet), f. CANARY, and g. BULLFINCH.

49. DESERT BULLFINCH. Also *hybrids* with the hen Canary.

50. Rock Sparrow, *Petronia petronia*.

51. (Lesser Rock Sparrow, *P. dentata* ?)

52. TREE-SPARROW, and *hybrids* with females of the HOUSE (a) and YELLOW SPARROW (b).

53. HOUSE SPARROW. The breeding of the Dongola race (*P. d. rufodorsalis*) is also on record (54).

Hybrids : a. House \times Tree-Sparrow, b. (\times Cape Sparrow ?), c. \times YELLOW SPARROW.

55. CINNAMON SPARROW. One record.

56. Benguela Sparrow, *P. iagoensis benguelensis*, 1923.

57. CAPE SPARROW, *P. melanurus* (late *arcuatus*), and *hybrids* a. CAPE \times HOUSE SPARROW ; b. \times YELLOW SPARROW.

58. GREY-HEADED SPARROW, *P. griseus*, and *hybrids* with the hen Cape Sparrow (a).

59. YELLOW SPARROW, *Auripasser luteus*.

60. GOLDEN SPARROW, *A. l. euchlorus*. Abroad.

61. ALARIO FINCH, and *hybrids* with females of the a. Grey Singing Finch, b. (Cape Canary), and c. CANARY.

62. White-throated Serin.

63. ANGOLA SINGING FINCH, and *hybrids* with females of

a. the Cape Canary, b. ST. HELENA SEED-EATER, c. GREY SINGING FINCH, d. CANARY, and e. a Siskin-Canary Mule (Germany).

64. GREY SINGING FINCH, and *hybrids* with hens of the a. ANGOLA SINGING FINCH, U.K., 1937 ; b. Green Singing Finch ; c. (Linnet and a further cross ? ?) ; d. CANARY.

65. CAPE CANARY, *Serinus canicollis*, 1927, 1928, and *hybrids* with hens of the a. (Alario), b. St. Helena Seed-eater, and c. CANARY.

66. SULPHUR SEED-EATER, 1917, and *hybrids* with hens of the a. WHITE-THROATED SERIN, b. CANARY.

67. ST. HELENA SEED-EATER, and *hybrids* with females of a. the LINNET, 1914, b. CANARY, c. Grey Singing Finch, d. (Saffron Finch ? ?).

68. GREEN SINGING FINCH, *S. m. mosambicus* (late *icterus*). *S. m. barbatus* has also been bred (69).

Hybrids on record with the females of the following : Greenfinch, a. GOLDFINCH, b. Siskin, c. Alario, d. GREY SINGING FINCH, e. CANARY.

70. SERIN, and *hybrids* a. \times Green Singing Finch, b. \times Canary, though this is only the mating of two subspecies, not a true hybrid.

71. CANARY. Universally bred. *Hybrids* are on record with females of a. Linnet, b. Siskin, c. Goldfinch, d. Saffron Finch, e. BULL-FINCH, and f. Purple Finch, and the many crosses the other way (some common), i.e. with the Canary as the female parent.

72. SAFFRON FINCH and *hybrids* with hens of the a. ARGENTINE SAFFRON FINCH, b. (St. Helena Seed-eater ?) (Canary ? ?).

73. ARGENTINE SAFFRON FINCH, *Sicalis pelzelni*.

74-6. *Sicalis arvensis* ; *S. a. arvensis*, the Yellowish Finch, Chile ; *S. a. minor*, Least Saffron Finch, Amazonia, etc. ; *S. a. luteiventris*, Yellow-bellied Finch. There are records of the breeding of all three races and of a *hybrid*, Least Saffron Finch \times Saffron Finch.

77. SCARLET ROSEFINCH, *Carpodacus erythrinus*, and *hybrids* with hens of the a. Greenfinch, b. Canary, c. (Purple Finch).

78. (Purple Finch : a weak *hybrid* record only, Purple Finch \times Canary.)

79. MEXICAN ROSEFINCH, *C. m. mexicanus*, and *hybrids* with females of the a. GREENFINCH, b. Canary, c. BULLFINCH, 1937.

80. House Finch, *C. m. frontalis*, 1915.

81. PINK-BROWED ROSEFINCH, *Propasser rodochrous*.
82. CROSSBILL.
83. BULLFINCH, and *hybrids*: a. Bullfinch \times GOLDFINCH, one record, 1915; b. (B. \times Redpoll ?); c. (B. \times Canary ? ?).
84. Red-headed Bullfinch. One record, 1916.
85. PINE GROSBEAK.
86. REED BUNTING, and a ? *hybrid* (Reed \times Yellow Bunting ?) (a).
87. Yellow Bunting.
88. CIRL BUNTING. One record, 1908.
GOLDEN-BREASTED BUNTING, *E. flaviventris*. One record, 1911.
89. MOORISH HOUSE-BUNTING, *Fringillaria sahari*.
CINNAMON-BREASTED ROCK-BUNTING, *F. tahapisi*.
One record, 1937, U.K. Two broods of young reared.
90. RUFOUS-WINGED ROCK-BUNTING, *F. t. septemstriata*. Abroad.
LAPLAND BUNTING. One record, 1916.
91. DICKCISSEL, *Spiza americana*. One record, 1911.
92. SNOW-BIRD, *Junco hyemalis*.
93. SONG-SPARROW, *Melospiza melodia*. U.S.A.
94. (White-crowned Song-Sparrow, *Zonotrichia l. leucophrys*).
Only a *hybrid* record with the hen GAMBEL'S SONG-SPARROW, 1905.
95. Gambel's Song-Sparrow, *Z. l. gambelii*, 1921.
HARRIS'S SPARROW. *Z. querula*, 1931.
96. CHINGOLO SONG-SPARROW, *Brachyspiza capensis*.
97. INDIGO BUNTING, and *hybrids* a. Indigo \times NONPAREIL,
b. (Indigo \times Canary).
98. NONPAREIL.
99. VARIED BUNTING, *Passerina versicolor*. One record: abroad.
100. RAINBOW BUNTING, *P. leclancheri*. Abroad.
101. TOWHEE, *Pipilo erythrophthalma*. Abroad.
102. ORCHARD FINCH, *Phrygilus fruticeti*.
103. DIUCA FINCH, the first success, 1887, U.K.
104. LESSER DIUCA, *D. d. minor*. Abroad, 1883.
105. PILEATED FINCH.
RED-CRESTED FINCH, 1926.
106. RED-CROWNED FINCH, *Rhodospingus cruentus*. Abroad, 1883.
WHITE'S WARBLING FINCH, *Poospiza whitei*, 1937, U.K.

107. GREY CARDINAL, and *hybrids* with hens of the a. POPE,
b. GREEN CARDINAL, c. Red Cardinal.

108. YELLOW-BILLED CARDINAL.

BLACK-CHEEKED CARDINAL, *Paroaria nigrigenys*. France.

BLACK-THROATED CARDINAL, *P. gularis*. U.K., 1937.

109. POPE, and a ? *hybrid* (Pope \times Grey Cardinal ?).

110. GREEN CARDINAL.

WADERS

By P. J. LAMBERT

One is invariably intrigued with the arrival of one's weekly bird paper and still more the monthly Magazine issued by the Avicultural Society. They are papers that are eagerly devoured by all bird lovers for one imbibes knowledge by the perusal thereof. In the weekly papers such as *Cage Birds* one reads of the treatment necessary for such birds as Budgerigars, Canaries, and some of the foreign Finches; the charm of these birds is ably set forth by various writers. Pheasants are extolled in the weekly papers and also our AVICULTURAL MAGAZINE. In the latter one reads of the very rare exotic birds from all parts of the world and such articles make charming reading. Waterfowl are occasionally mentioned in these papers but there is one group of birds that rarely receive mention, I refer to that group of birds called Waders. May I be allowed to extol their virtues and tell you of their charm? Possibly very few of our members have kept these birds; let me assure those readers that they have missed an avicultural pursuit which teems with interest, for Waders have an indefinable charm which will captivate any lover of nature. The term "Wader" covers a large group of birds and although the word has a most pleasing suggestion, it is not altogether appropriate; but for our purpose we can pass over the name by calling to mind the expression: "What's in a name?" Why such birds as Lapwings are included in this group I fail to understand. I have never seen a Lapwing wade. I must admit that my experience has been very limited with

this form of bird life, but during the past four years I have kept the following: the Dunlin, Ruff and Reeve, Redshank, Common Sandpiper, the Black- and Bar-tailed Godwit, Curlew, Whimbrel (I like to think of this bird as the Lesser Curlew), Lapwing, and Oyster Catcher. I was told that if one mixed many varieties in an aviary, fighting would take place, and this of a continuous nature. However, I tried the experiment and the trouble has never materialized. My Wader aviary is 12 yards long and 6 yards wide. At the south end I have enclosed a space of 2 yards long by the width of the aviary. I used boards and covered these with heather and this included the roof. This makes quite a pleasing effect and the front of this shelter is open to the width of one yard. In the middle of the aviary I have a shallow pond covering about 8 square yards, and this is built of concrete; a rockery relieves the harshness of concrete and I find that Waders do not eat the plant life I introduce. I do find it necessary to renew the water every week in hot weather, but with the aid of a garden hose I find it a simple matter to empty and refill. Feeding is not difficult; scalded biscuit-meal (coarse), a little boiled rice, and dried shrimps scalded with the meal. These shrimps are obtainable from Messrs. Rudd and Co., 180 Bishopsgate Road, E.C., and are inexpensive. Titbits in the form of ground worms and occasionally a little raw fish and meat is relished. When I feel sufficiently energetic I go back to my boyhood days and with a fishing rod and line and "fish kettle" visit the local stream where I catch minnows and sticklebacks; these fish meet with a hearty welcome from the Waders and the fish enjoy their new quarters for a very limited space of time. When I first kept Waders I discovered that some varieties, especially Godwits, easily went lame. I think the hard ground was to blame, and I covered the aviary with about an inch of sand. This gave the surroundings a very natural aspect and further lameness ceased. I have kept a great number and variety of birds in my time but I will emphatically state that of all birds I have found Waders the most interesting. They are continually active and rarely at rest, their antics will keep one amused for long hours. Let us have a look at my Waders and watch their habits. There is a Ruff facing another Ruff, they both extend their peculiar collars and one will imagine a mortal and bloody combat is about to take place;

they spring at one another, but instead of the deadly fight we anticipated, one finds it is merely a friendly spar and off one dashes for further fun ; he runs into a Whimbrel and the latter immediately seizes the Ruff's beak, shakes it, and releases it. A Godwit comes chatting along and inquisitively inquires what all the trouble is about ; both the Ruff and Whimbrel attack the new arrival and then the whole group of birds give vent to their various calls. It is great and youthful fun and of a most entertaining nature as it never ceases. Now a Godwit standing behind a large stone sees a Curlew approaching, it backs just as a boy would hide, the Curlew passes and the Godwit springs from its lair, another spar and as usual no damage is done, but if that Godwit did not smile then I have made a grievous miscalculation of bird life. Now we will throw them some worms. A Lapwing, which incidentally is a marvellously quick bird, has seized a lob worm and the other Waders near by are after it, a Ruff seizes the other end, and a Godwit intervening decides the " middle cut " may prove profitable and thus the unhappy worms meets its " Waterloo ". So the fun goes on. Now a Whimbrel decides on a bath and what is more pleasing than to watch such birds perform their ablutions ? Others, jealous of the fun, join him and within a few moments seven or eight have joined the bathing party. Such is their daily life, endless activity and playful excursions ; that, after all, is the secret of their charm. One must not expect gay colouring, they are generally of sombre nature. The Ruff, however, is a bird of most extraordinary plumage, no two Ruffs are alike and surely this is one of the most amazing peculiarities known to aviculture ? The colouring of their collars varies in a marvellous manner, some white, others grey or brown ; moreover the facial skin varies and yet the Reeve (female of the variety) are all alike, and these birds are not given to playful habits as are the males.

I have kept Waders with Pheasants ; the Waders ignore the Pheasant and vice versa, thus they live together in perfect content. I will confess that I have not yet tried to induce these birds to breed in confinement, but I feel convinced that there will be no insuperable difficulties. One imagines that small aviaries will be necessary, and that in the spring pairs must be housed in these. Next autumn I intend to build a few such aviaries. Small ponds

with rushes, sedges, and water plants will be introduced. I shall be surprised and disappointed if I fail. I do not anticipate causing such as Oyster Catchers to propagate, but many of the others should not be extremely difficult—we will see. I have just mentioned small ponds but I do not think that ponds are essential for Waders. I tried a few in a Pheasant aviary and merely gave them a fair sized bowl of water; they were quite content and kept in splendid condition. I mention this for the benefit of those who have no facilities for making ponds or do not wish for them.

I am hoping that many more aviculturists will keep these birds. I can assure readers that they will find them most pleasing and captivating pets. They are naturally tame. At the moment I have about fifty Waders in my aviary and all of them will approach to within about a foot or so if they think any titbits are on the point of being dispensed.

ALFRED

By OLIVE ST. A. S.

Alfred was a Black-capped Lory, a lovely thing of glowing scarlet and flashing Kingfisher-blue, soft verdant green, and velvety black.

We bought him in a Chinese bird-shop, and from the first he hated me.

Alfred's vocabulary was very free, and fortunately for most of his hearers was in a Malay dialect not very widely spoken. But there was no doubt as to the import of most of the raucous remarks that used to be flung at my innocent and inoffensive head, so packed with meaning were they. Let anyone of the male sex approach him though. What a transformation! Gone was the flashing eye and snapping beak, and with what honeyed words did he spread his burnished quivering wings and bow his dusky head in humble adoration.

Those who could understand Alfred's speech assured us that he was unusually clever, and I have seen Malays sit for hours listening to his flow of conversation and, judging by the smiles of the audience and slightly anxious side-glances in my direction, one assumes his

type of humour must have been rather Rabelaisian at times. He never learned to speak one word of English, and his little brain must have been so packed with other things that it could not absorb any more knowledge.

Alfred was our first Lory, and I shudder to think of what his fate would have been if a naturalist friend had not arrived the day after his purchase and told us how to make up the equivalent of the bird's natural food. Until then he had sat gloomily picking to pieces the Parrot food with which we had provided him, and as all Lories are nectar-feeders one can imagine his inward comments.

We've kept many Lories since Alfred, but only two are outstanding in my memory. One a Black Lory, a soft bronzy black, washed underneath the body with a delicate sapphire-blue, a bird which followed me about like a dog, and which would clamber on to my shoulder and "chuss" around my neck, keeping up a running commentary of soft mutterings. You could give this bird a piece of paper rolled up into a ball, and it would play for hours like a kitten, lying on its side and "back-peddalling" it till quite exhausted. The other, a little Rosenberg's Lorikeet, "Ikey," a tiny green-jewelled thing, was a bundle of nerves and intelligence. One morning he was found dead in his cage and we never discovered the cause of his untimely end.

Now Alfred was a bird of altogether different fibre. If one coughed or sneezed in the night there was an instant reply, a hollow cough or sneeze followed, I regret to say, by the usual "postscript" which is universal throughout the East, and generally accompanies a heavy cold. The daily bath was a great event. A bowl of water would be placed invitingly near, and after many coughs and sneezes (and PSS.) he would clamber carefully down and perch on the edge and splash and shriek and drink and—yes—gargle to his heart's content.

One early morning, when the birds were all being put out to enjoy the first rays of the sun, an unusual clamour of human voices arose through the cool dew-drenched air, and hurrying feet were heard approaching from all sides. All these sounds being so very odd at that hour of the morning I was compelled to tip-toe to the edge of the veranda and peer cautiously over. Never shall I forget the expression in the topaz eye that was turned up to meet mine! What pride,

tinged with self-consciousness ! What an air of slightly guilty smugness ! Alfred, bless " his " heart, had laid an egg.

I can remember when I was very young asking my mother if Parrots ever laid eggs, and I can hear her reply now, after a second's modest hesitation : " Well, not *private* Parrots." So, you see !

Alfred's " shame " reposes in the Singapore Museum. A Lory's egg is rather rare in captivity.

ORNAMENTAL PHEASANT SOCIETY

The O.P.S. will be holding its annual summer meeting on 21st July, at the offices of the London Zoological Society. We are most grateful to this Society for once more placing their Council room at our disposal, and our members appreciate this kindly gesture. I understand that the Avicultural Society will be holding their meeting in the afternoon of that day and our meeting will be at 11 a.m. I do hope that any members of the Avicultural Society who are not members of the O.P.S. and who are travelling to London for the Avicultural Society meeting will join our Society and attend our meeting. This meeting will be followed by a luncheon, and this will be served in the Zoological Gardens. In case any reader of these notes may wish to join our Society, I may mention that the subscription is only 6s. per annum, and no entrance fee is required. This subscription can be sent to me at Nawton, York. On receipt of same I shall be pleased to send the July issue of our *Journal*. This *Journal* is, as usual, most interesting to all bird lovers. Two magnificent coloured plates adorn the pages, and the articles are by famous aviculturists, our President, M. Delacour, is at his best. Monsieur Malisoux brings his scientific knowledge of his subject to bear, and Madam Malisoux for the first time has honoured our pages. Baron Carpinello of Sicily entertains us with a description of his aviaries and general methods. Mr. Mackie writes about Partridges in his usual graceful style. Mr. Beever, a phasianist of long standing, tells us of his twenty years' experiences with his favoured hobby. Monsieur Hannens also writes of the extraordinary difficulties that

beset the phasianist of the period just after the Great War. There are other writers who prove most pleasing. There are some charming aviary designs. The results of the photographic competition are shown for us all to appreciate the judgment of Mr. E. R. W. Lincoln, the editor of *Cage Birds*, six plates are shown, and they are most interesting. Great Britain did not shine in this competition. Mr. Jones, of Vancouver Island being first and third, Mr. Schmidt, of Yugoslavia, second and fourth, Madame Piret fifth, and Mr. Mackie, of Leeds, just managed to save Great Britain from being amongst the "also rans". I hope that every member of the Avicultural Society will see this *Journal*, we are justifiably proud of it, and we are most grateful to all our members who have given of their knowledge, and this with such grace and willingness.

JEROME LAMBERT.

CORRESPONDENCE

MADAM,—With reference to Mr. H. C. Martin's inquiry: *Corbatita* is the name given in Argentine, Uruguay, etc., to *Sporophila caerulescens* (English name Bluish Finch), a Southern variety of *Sporophila ornata* of Brazil.

G. DE SOUTHOFF, C.M.Z.S.

MADAM,—Speaking for myself, the article by A. F. Moody (published in the June issue of the Magazine) was much appreciated. The notes on the Brambling were of special interest, because although I have bred its near relation, the Chaffinch, into the third generation, I have never known even captive-bred birds feed their young, to any extent, on anything but insect food.

Have bred with "captive-bred" birds, solely for the experiment suggested. The captive-bred Chaffinches have never seen an insect since they were self-supporting, except such insects as they could find for themselves in the aviary, even so, they would not attempt to feed a brood unless such food was supplied. My experiences with other Finches would seem to coincide with the experiences of Mr. Moody.

I would like to add that my original article was intended as an invitation to such people as: Mr. A. F. Moody, Mr. G. H. Edwards, Mr. W. H. Workman, Dr. Amsler, and Mr. P. Lambert. I suspect such fanciers to be in a position to supply much interesting and valuable data with regard to the common but neglected British species, including the Waders, the latter group being worthy of almost unlimited space. At least such is my humble opinion.

RICHARD JAMES.

BREEDING OF BLACK-HEADED NUN

MADAM,—I am submitting hereunder an extract from a paper which I read at the last meeting of the Avicultural Society of South Africa, and which you could use if you think it is of sufficient interest to members:—

“The Black-headed Nun has just been bred by me, and although it is found in so many aviaries, it has very rarely been bred in captivity. This bird is fairly common. It is a seed-eater coming from India, and is a bright chestnut-brown with a black head and breast and blue bill. It is of the same species as the White-headed Nun and the Tri-coloured Nun. It is an excellent bird for any mixed collection, as it does not interfere with other birds. It is a good bird for the beginner, as it is comparatively cheap in this country, and from my experience fairly hardy.

“As far as I can ascertain no medal has been claimed from any Avicultural Society in England for a first breeding. However, the bird has bred here, and I think with proper facilities it is not a difficult matter. When breeding the parents are very timid and require a very secluded place. I do not think they will breed in tins or nesting-boxes. The pair which produced the young ones made their nest in an old privet tree which was covered with teff. They made a tunnel about 18 inches long leading to a dome nest. It is only by chance a nest can be discovered. The young are a plain light brown, but in about a month's time small traces of black start to appear. The birds feed on Canary seed, millet, manna, maggots, and mealworms.”

I would very much like to know something more about these birds, and although I have looked up a number of books can find nothing about the Nuns.

W. C. H. ZIPP.

P.O. Box 6899,
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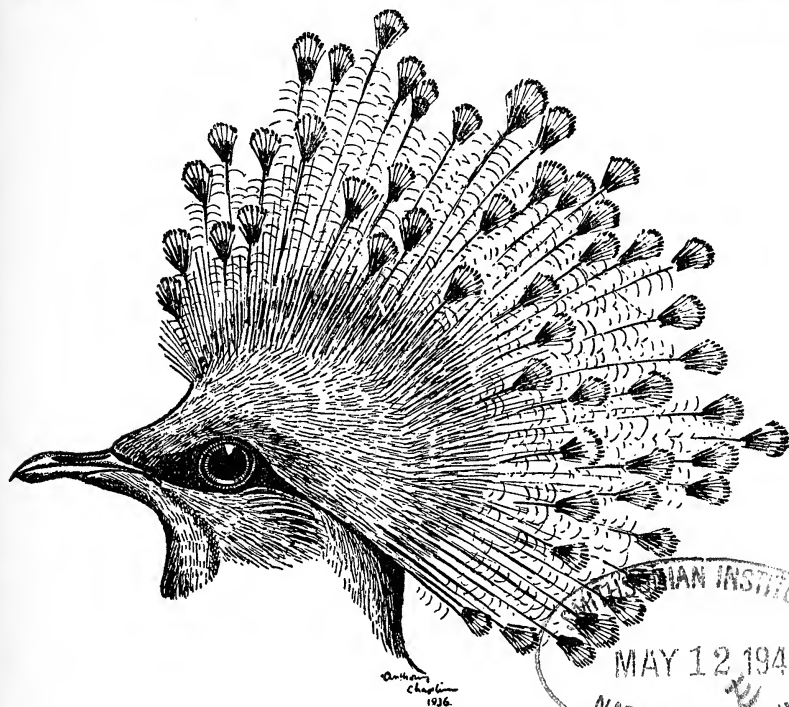
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THE AVICULTURAL MAGAZINE



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THE AVICULTURAL SOCIETY

FOUNDED 1894

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The Subscription to the Avicultural Society is £1 per annum, due on the 1st of January in each year, and is payable in advance. The entrance fee is 10/-. The *Avicultural Magazine* is sent free to members monthly. Members joining at any time during the year are entitled to the back numbers for the current year, on the payment of entrance fee and subscription.

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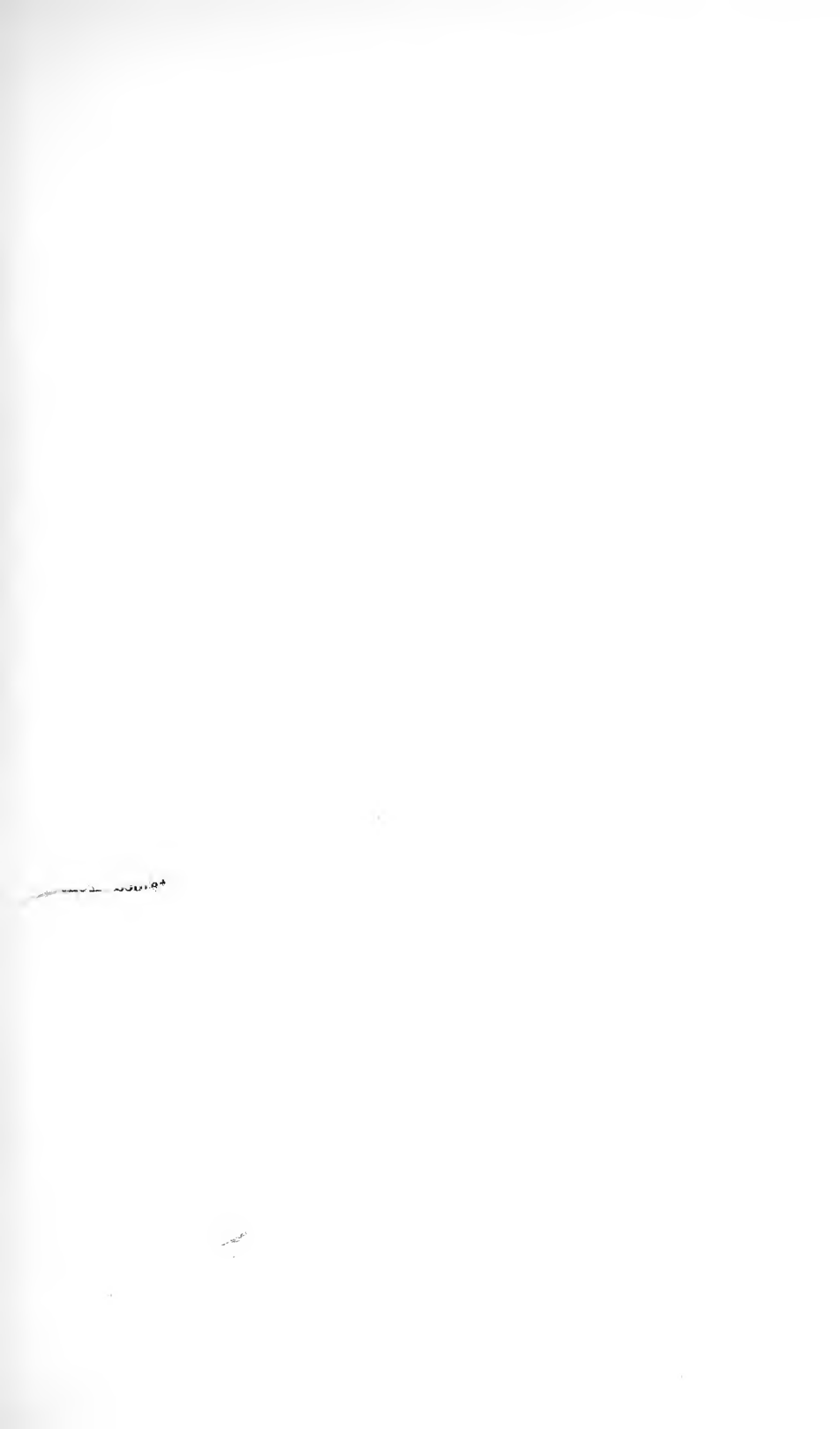
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Indian Short-billed Minivet.
Pericrocotus brevirostris.

THE AVICULTURAL MAGAZINE

THE JOURNAL OF THE
AVICULTURAL SOCIETY

Fifth Series.—Vol. III.—No. 8.—*All rights reserved.*

AUGUST, 1938.

THE SHORT-BILLED MINIVET

(*Pericrocotus crevirostris*)

Minivets are strikingly beautiful birds, and everyone who has lived or travelled in Northern India, Burma, China, Indo-China, or the Malay countries has noticed the marvellous flocks of brilliantly coloured birds flying high or feeding in trees. They are usually common enough in jungle and open country with numerous trees, which are essential to their life.

There are a good many species, most of them scarlet, pink, or orange with black bands, and black tails and wings in the males, yellow and grey in the hens. A few are black, white, and grey.

The commonest Indian and Indo-Chinese species is probably the well-known Scarlet Minivet (*Pericrocotus speciosus*), which is brought over alive in small numbers almost every year. The Short-billed Minivet, depicted on the adjoining plate, is very similar, but a great deal smaller, rather richer in colour, with a proportionally shorter and thinner bill. It also comes to us, but not so often, and it is not so common as the larger species in the wild state, although by no means rare.

I have possessed the Short-billed Minivet on two or three occasions.

A very fine male brought over by Mr. Frost, lived over a year in one of my tropical greenhouses. It would probably still be alive now if it had not been fed so many mealworms, which prove extremely dangerous to small insectivorous birds. If offered liberally, they soon become the only food accepted; the birds become light, and die after a few months. I strongly advise our members to cut them off entirely from the bill of fare of their Minivet's, Flycatchers, and other small insect-eaters. A good insectile mixture, with a few flies, ant-cocoons, clean maggots, and other small insects is what they want. If insects are unobtainable, boiled yolk of egg and a little raw meat, cut-up fine, will often be just as satisfactory.

At liberty Minivets are high flyers. Their short legs and weak feet only allow them to stand on small branches, and nearly all their movements are effected on the wing. Their natural food consists of small berries and insects. In captivity they are no cage-birds, as can be easily understood. They need a roomy aviary, where they can fly freely, or better a large tropical house. They usually become exceedingly tame, but they cannot be said to be very easy to keep in good condition. The Short-billed Minivet is decidedly one of the prettiest and most desirable species, and their marvellous colours and pretty shape are well worth the care they require. One drawback, however, is the loss of the red in the male plumage after the first moult in captivity. Even in a tropical house where such birds as the Red Sun-bird (*Æthiopyga seherix*) keep their scarlet plumage perfectly, my Short-billed Minivet became pale pinky orange. An elaborate colour food would have to be discovered and tried, and there is no doubt that it could be found. Perhaps one of our ingenious members will be tempted by this problem.

A not unusual but unforgettable sight in the forested parts of India and the Far East is certainly that of a flock of fifty or more Minivets, scarlet and black, or yellow and grey, flying high above the green jungle trees, against a turquoise-blue sky.

NOTES FROM SOUTH AMERICA

By SYDNEY PORTER

Notwithstanding the fact that Rio de Janeiro is probably the most beautiful of all tropical cities and that it is the capital of a state which is nearly half the size of Europe and also that it contains more species of birds than any other country in the world, its Zoological Gardens are the poorest I have ever visited.

In what could be a magnificent park are a few dilapidated pens and aviaries which contain, besides a few indigenous mammals, such as jaguars, pumas, coatis, etc., a very poor collection of native birds under conditions which leave very much to be desired. In a small aviary were a few desiderata, including three very tame Orinoco Geese, a bird I have always desired to possess, about half a dozen Great White Egrets, all in full breeding plumage and far whiter than any I have ever seen in Europe. Egrets kept in captivity in Europe always lack the immaculate whiteness of the wild birds. There were also a few White-faced Tree Ducks.

In some shockingly small and dirty aviaries were a few Scarlet Ibis faded almost to a dirty white, a Cooi Heron, a Boat-bill, and a Night Heron (*Nycticorax obscurus*). On a stand resembling that of a Macaw was a female Frigate Bird; off this the wretched bird apparently never moved.

One noticed a few indigenous Parrots and, considering Brazil's great wealth of Parrot life, the collection was exceedingly poor. There were various species of Macaws, Illiger's, Red and Blue, Red and Yellow, and Blue and Yellow, an odd Amazon of the Blue-front variety, and a single Festive, but what took my eye was a pair of the very rare and beautiful Violet-bellied Parrots, birds looking like a small cock Eclectus Parrot, with brilliant purple-blue underparts. Then there were a pair of small Parrots of which I did not know the name and I think must have been quite rare. They were about the size of a Caique and of a uniform pale mealy green. I recently saw a specimen of this bird in the Dudley Zoo labelled as an "Antipodes Island Parrakeet"!! There were a great many Yellow-breasted Caiques, a good many together

in a cage much smaller than those used at the London Zoo. Besides an odd Nanday Conure this completed the Parrots.

Of birds of prey, I noticed a Condor with a broken wing, several Caracaras (*Polyborus tharus*), a very common bird of prey in South America, a Chimango (*Milvago chimango*) or Common Carrion Hawk, a still commoner bird. There were several large eagles including a European White-tailed Sea Eagle which had been presented in 1914. There was also a female King Vulture.

One rather expected to see hosts of Trumpeters, Curassows, Guans, etc., of the former there were none ; in all the places I visited in Brazil I did not see a single Trumpeter, although it was for these birds that I really went to that country. Of the Curassows, there were four specimens of three varieties, there was also a pair of Guans and a single pair of Penelopes and two pairs of those charming birds, the Seriamas. There were, as one would expect in a South American Zoo, a few Rheas of the common variety. Of exotic birds there were a few Red-billed Weavers in a canary cage, a tame Raven which was fed upon nothing else but bread, a pair of Emus, and, what really surprised me, a magnificent specimen of a male Argus Pheasant, the best I have ever seen ; evidently the damp hot climate and the maize upon which it was fed suited it.

As for the mammals, these were housed under appalling conditions which had perhaps better not be described.

I expected to be able to pick up a few rare birds in Brazil for my aviaries, my chief objective being, as mentioned above, Trumpeters, but I found very few, if any, native birds offered for sale. Strict laws now prohibit the killing or catching of almost every bird. Before these laws were enacted, Brazil's bird life was being exploited to a shocking degree. It supplied, after Venezuela, the largest amount of Egret feathers for the millinery trade and an enormous number of bales of brightly coloured bird skins were exported to Europe and America, especially the skins of Humming Birds.

After seeing the crates of brilliantly coloured Tanagers which used to arrive in this country looking as though the birds had been dipped in treacle, only to linger a few weeks in the dealer's shops, one was not sorry that an end had been put to this nefarious traffic.

I visited several bird shops in Rio and Santos but found that their stock-in-trade consisted mainly of Canaries, Java Sparrows, various species of African Waxbills, and Weavers, and the commoner varieties of Pheasants. One man did show me two Black-headed Siskins and a dying Grackle which he kept under his writing desk for fear the police should see them.

Unless one goes into the interior of Brazil, one sees very few birds, except an occasional Humming Bird around the banana flowers in the gardens, a few *Spermophila* Finches and small flocks of *Brotogerys*, and Parakeets at the tops of the high trees and palms, far too high up to be able to distinguish their species.

I was also anxious to get hold of a few Scarlet Ibis but only once did I see any of these and they were in a garden with some White-faced Tree Ducks.

Tyrants of various species were extremely common in the inhabited parts of Brazil and in some of the parks their cries were almost deafening. Purple Grackles seemed to take the place of Starlings and one saw Thrushes which were very reminiscent of our own birds. I think, as on the Continent, these birds must be eaten, for I frequently saw, but never sampled, "Merle" on the menus of various restaurants.

The only places where I saw any Brazilian birds offered for sale were Rio Grande do Sul and Maceio, the former a delightful town just inside a great lake or lagoon at the far south of Brazil. The birds were in the very picturesque market place and they consisted of Naked-throated Bellbirds and a few Red-crested Cardinals, several Thrushes which I think were the Red-breasted (*Turdus rufiventris*), a few *Spermophila* Finches of which there are a great many varieties in Brazil, and a single Purple Grackle; why these birds should have been on sale when the laws regarding the sale of birds are so strict, I do not know. I certainly saw a good many cage birds in Rio Grande do Sul belonging to private people, these mainly consisted of Budgies, Canaries, Red-crested Cardinals, the local Thrushes and an occasional Bellbird. In fact when I was walking in the streets one Sunday, I heard the discordant clanging of church bells and after a time they stopped, except one which went on for a little while and then stopped and went on again and, as we moved in the direction from whence the sound came,

we found that it was made by a Bellbird. It was an adult bird in very fine condition with snow-white plumage and bright green naked throat.

Some miles outside Rio Grande do Sul on the Atlantic Coast was a wonderful stretch of sandy shore, hundreds of miles long and an ideal haunt for seabirds. A bird which I saw here for the first time was the Skimmer or Scissor-bill, a strange black and white, Tern-like bird possessing an extraordinary beak. Darwin describing it says, "The beak is flattened laterally, that is in a plane at right angles to that of a Duck or Spoonbill. It is as flat and elastic as an ivory paper knife and the lower mandible, different from any other bird, is an inch longer than the upper." The bird obtains its food by flying low over the water and ploughing the surface with the lower mandible, thus catching small fish which swim near the top of the water. The beak gives the bird an extremely grotesque appearance.

In the marsh lands near the sea were to be seen the conspicuous and graceful forms of numerous Great White Egrets, now safe at last from persecution. I brought a fine pair of these back with me from the Argentine and unfortunately lost them through my own foolishness. Their plumage was rather soiled and one day on board the ship on the homeward voyage I thought I would put them out in a shower of rain to enable the birds to wash themselves, unfortunately the "shower" proved to be a torrential tropical downpour of such severity, that one bird sustained a broken wing and thigh and the other died the next day. I cursed myself for being such a fool to lose though my own fault these two splendid birds. Strange to say the rain had no such effect on two pairs of Snowy Egrets which I also put out.

On this wonderful sandy beach which stretched as far as the eye could see on either hand, we saw a Great Grebe (*Aechmophorus major*) laying out on the sands; at a distance it looked a very strange creature, almost like a prehistoric reptile with its large flattened body and long narrow head. The Grebe was surrounded by many other shore birds such as Sandpipers, Oyster-catchers, and others which I was unable to identify. As we approached, the bird turned round and made off towards the sea with motion like that of a seal, undulating its body along the sand; as the sea was very shallow, it was quite a long time before it

could reach a depth where it was able to swim. I have seldom seen a bird so ungainly on land as this one.

One of the most beautiful birds which I saw in Brazil was the Widow-tyrant, a bird which at a distance looked like a large cabbage white butterfly. In fact so butterfly-like is its flight that at first I mistook it for a huge white butterfly. It has a habit of perching on wire fences or telegraph wires on the sides of the road. Tyrants of many species are very common in all parts of Brazil.

One of the most interesting places visited, at least as far as local colour was concerned, was Maceio, a small port in the north of Brazil which still retains much of its old Portuguese atmosphere and is seldom visited by European travellers. Here there were birds in abundance; expecially in the market, in fact almost every stall-holder seemed to have one or more as a pet. The variety, however, was not very great, and the most commonly kept birds were various kinds of the *Spermophila* Finches, one species in particular, a black and chestnut bird with a huge thick beak, seemed to be an exceptionally sweet singer; there were also Saffron Finches and Red-headed Cardinals. In one place, a kind of lottery exchange, there was a Bellbird in the transitional plumage, which was white spotted with green. It seemed to be in a perfect frenzy to make itself heard above the general hubbub of the swarming crowds and in this it seemed quite successful for its clanging notes could be heard several streets away. The call of a Bellbird when heard at close quarters is terribly penetrating and makes one's ears ring for a long time afterwards. There were also some beautiful blue-eyed Black and Yellow Cassiques, pouring forth volumes of song. In fact all the hundreds of caged birds I saw seemed to be singing. In the extremely quaint and picturesque market place, where one could buy anything from snake skins to sewing machines, and where every old nigger woman seemed to be smoking a huge pipe, there was but a single bird stall, here were only a few Archbishop Tanagers, Red-headed Cardinals, Cassiques, Saffron Finches and a good many varieties of *Spermophila* Finches.

I have never seen so many cage birds anywhere as in this remote town; every house seemed to have one or more cages and even the ships in the bay had them to. All the birds appeared to be well looked after and to be singing.

I spent about a month in Brazil but saw very few birds in a wild state ; as with most other countries, Brazil is destroying its forests, and when the indigenous flora goes so does the avifauna, especially if it is the forest type. Cutting down the forests and planting with crops means despoiling the country as far as the naturalist is concerned, and ultimately as far as the farmer is concerned. Over the miles of country where the native vegetation is destroyed there is no cover or undergrowth for the birds in which to hide and nest, and with the destruction of the plants, so vanish the insects and fruits upon which the birds feed, consequently in the cultivated districts one sees very few birds whatever.

Had I have gone into the far interior where the tropical forests are I should doubtless have seen a great many birds, but unfortunately I had no time for that.

The commonest bird in South America is the familiar Southern Turkey Vulture, which is to be seen flying in hundreds, with outstretched, motionless pinions, above the smaller towns, on the lookout for any edible garbage or carrion. When the fishermen haul in the catches, these birds may be seen in hundreds on the beach waiting for an odd inedible fish or the offal from the others.

As I had very little time in Montevideo I did not go to the Zoo there, which I was given to understand was very little better than the one in Rio. As there seem to be no laws prohibiting the catching of birds in Uruguay, one sees many native birds kept by the inhabitants of Montevideo, chiefly Red-crested Cardinals, the various *Spermophila* Finches, and various local Thrushes. I discovered one good bird shop where I saw many birds of local origin.

There were several specimens of the local Mocking Bird (*Mimus modulator*), a bird very much larger than the North American species, these were priced at about 35s. a pair. I noticed several species of waders, Stilts were 16s. a pair, there were also various Plovers and Redshank. There were also some very fine Marsh or Military Starlings (*Trupialis defilippii*), a bird clad in the most vivid scarlet and varying shades of brown ; some beautiful Blue and Yellow Tanagers (*Tanagra bonariensi*), Ovenbirds, Grackles, many local Thrushes which are great favourites on account of their song, and, strange to say, a Fieldfare,

but how this came to be in Uruguay is a bit of a mystery. I also noticed other exotics in the way of Java Sparrows, Waxbills, and Ring-necked and Silver Pheasants. There were a few Amazons and a very fine Red and Blue Macaw priced at £3, which I would have bought had I not anticipated staying for some time in Buenos Aires.

(To be continued.)

THE ORANGE-BELLIED GRASS PARROT

(N. Chrysogaster)

By J. F. M. FLOYD

Some nine years ago, a party of ornithologists who were in the south-east of South Australia on a bird observing expedition, noticed some Parrots of the *Neophema* group feeding on the grass near a lake.

There were about twenty of these birds, and, as they rose in flight, one was shot for purposes of identification.

When the bird was picked up, it was found to be the Orange-bellied Grass Parrakeet which had been thought to be extinct or nearly so.

No report of the existence of these birds had been received for many years. Early in the twentieth century one had been shot by a resident of Robe, and forwarded to the Museum for identification.

The news of the reappearance of this rare Parrot naturally caused some excitement among the ornithologists, and also among the aviculturists, several of whom decided that they would like to see a pair of these birds in their aviaries.

Many years ago when that great ornithologist, Gould, toured Australia and classified most of its birds, the Orange-bellied Parrot at that time had its habitat in the southern portion of Tasmania.

It was known to nest in or on the low broken-off ti-tree stumps, 2 or 3 feet from the ground, and it was this rather foolish habit which made it an easy prey to foxes and other enemies, and it was considered that these factors might ultimately lead to its extinction.

Even in those days the Parrots were known to migrate, at certain seasons of the year, to the south-eastern coast of Australia between Kingston in South Australia and Portland in Victoria, a habit that was shared, and still is, by the Tasmanian Firetail Finch.

This Finch is also to be found in the south-east and now nests there, as I observed the parent Finches with two young ones recently when trying to catch the Orange-bellied Grass Parrot.

In 1927, 1928, and 1929 I made three trips to the south-east in search of this Parrot. On one occasion I heard some *Neophema* calling as they flew some distance away but I was never lucky enough to see one. On one trip I picked up a dead one in some reeds; it had been shot some months before, but there were enough feathers attached to the skeleton to enable me to identify it. Sandwiched in between these trips had been two others in search of the Scarlet-chested Parrot, which were unsuccessful, but while I was in England it is now avicultural history how the Splendids were located, caught, and bred in captivity.

On my return from England I made another attempt on the Orange-bellies at the end of 1933 and once more failed to sight the bird.

Then came 1934, and at the end of October, after a fast trip averaging 49 miles per hour, I arrived at our destination and proceeded to take a walk. My son aged 14 accompanied me. Within five minutes we flushed three birds from under a bush and they only flew about 10 yards and perched on another small bush about 2 feet high.

It was 4.30 in the afternoon and the light was good. Can you imagine the rate of my heart beats, when I recognized the Parrot I had been chasing for seven years?

A little farther on we came across two more and that was enough—the birds were there! I did not like my chance of catching any as it was on a hillside with a large bare area and to hope that the birds would land anywhere near my nets seemed to be asking for a miracle.

Hurrying back to the car, we brought the trapping gear up the hill, set a net, built a hide, and, while doing so, saw two flocks of over twenty of these birds flying overhead.

After dinner the time was spent overhauling all the devices which are part and parcel of any attempt to catch birds.

Next morning we arose at 4 a.m. and stayed in the hide until 9 a.m. The only exciting incident occurred when, on walking up the hill, I nearly trod on a 4 ft. Black Snake which one would hardly expect to meet at that chilly hour of the morning, I killed him with a piece of fencing wire which was lying handy and kept a sharp look out while hiding in the bushes. Not a bird was seen or heard and at 9 a.m. we adjourned for breakfast.

After breakfast it commenced to rain and continuing all day managed to register 2 inches. That settled all bird catching and later in the afternoon I went for a drive out to a station about 10 miles away to see if the people there had ever seen any of these Parrots. On the way we flushed twenty-five in a new spot and decided to try our luck there the next morning.

Awake again at 4 a.m. and off to the new ground—into the hide after seeing that all preparations were made, and at 6.20 we heard the Zit-Zit of approaching *Neophema*. Two landed close to me—within 12 feet, and as I had a good look at them I thought the old heart would burst with excitement.

Unless you have tried trapping birds you could never realize what one goes through when the longed for bird arrives within range of one's nets, I was able to observe the birds closely and the bottle green back and wing feathers were very noticeable and very different from the Elegant, Blue wing, and Rock Parrot shade. These two birds fed on some fine native grass seeds, the grass being about 3 inches high.

Dandelions were also very numerous and as the sun was behind clouds, these were closed up. I was interested to see these birds nibbling at the closed dandelion heads and as they had now worked to within 5 feet of my hide, there could be no mistake about this.

Can you imagine how still one has to keep in a flimsy hide of bushes when the birds are as close as that?

Cramp—rheumatism—sitting on the wrong leg or with one foot asleep are all in the day's work, and the pain must be endured until the birds are caught or have flown away. At 6.50 one

bird had worked its way into the area covered by the net—the other was still some distance away. I could not take the risk of trying to get both so with a prayer that my nets would work fast, I pulled and shot out of the hide, hopping down the slope on one leg, as the other had been asleep for fifteen minutes. Under the net was a glorious orange bellied cock bird which I promptly withdrew and put into a specially prepared cage protected inside by soft netting.

The other bird had flown away but I did not mind that because I was now the possessor of a live *N. Chrysogaster*. Re-set the nets and back to the hide, there to gloat over my trophy. He was beautiful and as fat as butter. By 7.20 another bird had come my way and this I also caught. Another cock. Nothing more before 9 o'clock, so off to breakfast with the two Parrots.

They proved to be remarkably tame and quiet and when I put a hand inside the door one jumped upon it, and sat there for five minutes while the various inmates of the house came and admired it.

The remainder of the day was a blank until 4 o'clock—blank as to catching birds but not as to seeing them. On one occasion I had seventeen of them feeding within 10 feet of the net. They had been feeding for a long time and had fed from 50 feet away until quite close to the net. I had hopes and had hardly breathed for over an hour when a motor car passing along the Millicent Road disturbed them and off they flew.

Golf is not the only game that acquires a vocabulary.

At another period fifteen were close handy but would not notice the call bird—I had risked one of my first birds as a call bird. However, before daylight faded I had caught two more and so ended a most satisfactory day. Four birds—three cocks and one hen.

Next morning we only caught one but that was a hen so I was very thankful, but, as I could not stay any longer, we packed up and returned to Adelaide with five birds—and were we excited?

All told I made three more trips—hasty ones of a day and a half and found each time that the birds were getting less plentiful and much wilder. All told we caught ten—three pairs I am certain of and possibly a fourth. The last trip was a blank as the birds had migrated.

Although I did not catch many, I had a wonderful opportunity

of studying the birds and came to certain conclusions regarding them. These may be incorrect (further observation has proved this, 1935 and 1936) but until more certain information comes to hand they will do as a working hypothesis.

In all the time I watched these birds (over eighty hours' hiding in bushes) I never saw a young one, so concluded that the birds had not yet nested, although it was nesting time for all the birds we know.

They were in excellent condition, breeding condition in fact, but apparently had not bred and were all in adult plumage. Also at times one would see an odd hen arrive on a tree and in a few minutes fly down to feed. A little later three more would arrive and perch on a tree—two cocks and a hen. Some chat would take place between the hen on the ground and the three on the tree. A few moments later the odd cock would fly down and feed alongside the lone hen, chattering in between nibbles at the grass seeds. This incident occurred on many occasions and it seemed obvious they were choosing their mates.

As they apparently had not nested, it seemed likely that they did not live in Australia, but came, probably, still from Tasmania and, I should imagine, from the farthest south it is possible to go, where the scrub is almost impenetrable. It is cold there, and the grasses seed about two months later than on the mainland, so I came to the following conclusion :—

(N.B.—These sounded fairly reasonable and satisfactory, but I have since proved they were wrong.)

1. That the Orange-bellied Grass Parrot is still in Tasmania most of the year.

2. That in our spring season they fly across to the south-east—which they regard as a trysting place, there to feed on the special grasses they like, get themselves into breeding condition, choose their mates, and when the seeds are withered they fly back to Tasmania and there nest, finding their later grasses seeding about the time the young would be hatched, which I imagine to be toward the end of December.

Other facts noticed about them are that they are much more sociable among themselves than Elegants and Bluewings.

It is unusual for Elegants or Bluewings to join forces with other parties who may be feeding, in fact they rather tend to ignore them.

The Orange-belly is much more friendly and will join any party that he sees perching or feeding and will enter into conversation with all and sundry. He is a slow feeder and spends a long time over this business, an hour and a half being nothing at all.

A very fast flyer and difficult to catch.

There is a certain burr which grows in profusion in his district ; it has a very bright dark green leaf and is covered with burrs which break into hundreds of points and stick all over ones socks and clothes when the burr is ripe.

At the time of the bird's presence in Australia they are green and he is exactly the colour of the leaf, so much so that it is impossible to locate him when he has walked into a patch of this burr unless he moves his head.

There is a difference between the cock and the hen which is more noticeable at a distance than close up.

The hen is a trifle duller in plumage but not much and has a one-colour frontal band of turquoise whereas the cock has a two colour band—royal blue edged with turquoise. The hen's body colour looks the same as the cock's would look with a little dust sprinkled on it. The bottle green back is very distinctive and is much the colour of the Turquoise.

This green shades from the neck over the breast, slightly olive in colour, tapering to lime green below the breast to the abdomen, where between the thighs is a large orange patch which in some specimens may be up to $1\frac{1}{2}$ inches in length.

The cock has a yellow tinge in the inside of the thighs which is missing in the hen. The wings are edged with a rather wide band of royal blue which merges into the green by mixing the colour with it.

Call much like the Elegant, but there is a difference which I cannot convey. The young have a faint orange patch showing and faint frontal band and the sex can be distinguished even two weeks from the nest.

By going farther afield I have proved my theories wrong by the following facts :—

The birds migrate from Tasmania by June. They nest over in

South Australia in July. The young leave the nest about the end of August.

Largest clutch with parents that I have seen is four.

They return to Tasmania by December. They like the same food as other *Neophema*. They are more friendly to each other than Elegants, Bluewings, and Rocks, because there are not many of them, only a small community or a few small communities.

Fortunately their breeding place is not known, although from observations in the past two years I know it within a radius of five miles and could find it on horseback. One would get bushed on foot as well as getting very tired walking over scrub covered hills. It is as hardy as other *Neophema* and has the same delicate skull.

They have hatched for me, but the young had their heads eaten (by mice I am afraid) three days later. This article was mislaid when written owing to changing my abode and has just been rediscovered, so I have added my later knowledge to it.

(This is the last sheet in the block and there are a few more words to add.)

I agree with Lord Tavistock that they are one of the three *Neophema* and the other three are *Neononades*.

From their colours I cannot see the Elegant and Bluewing existing as a hybrid between Orange-belly and Rock. I believe there is some-one writing to this effect although I have not read the article.

There is no yellow on the face below the eye but just a tinge of lime green which also shows round the eye as a faint ring.

My only hatching experience was four eggs laid and three hatched. They have not had a fair chance with me as at both breeding seasons they had to be caught while I was changing my home and they have now had one year in which to get used to their new quarters so I think they will not be more difficult to breed than the other members. The hen comes into breeding condition much later than the cock.

BREEDING RECORDS

THE MADAGASCAR WEAVER

(Foudia madagascarensis)

By ALFRED EZRA

I have always longed to breed this very beautiful weaver, but hens were difficult to get. I was lucky enough to get a few of these birds from our well-known collector, Mr. Frost, a couple of years ago and some of them turned out to be hens. Some were turned out in one of my large aviaries, they have always done well. A nest was made of grass only and was pear-shaped, with a large entrance hole on the side. The top of a *Cupressus* was chosen for the nest. By the 17th May four eggs were laid. Three young were hatched out by the 28th May. The fourth egg was infertile. All the young left the nest on the 15th June. They are almost identical with the female but are a trifle smaller and darker in colour. The young were reared on flies caught by the hen bird on the wire of the aviary and a few mealworms. Although the parent birds had access to mixed seed, insectivorous food, and fruit, they were never seen to be eating any of them. On the 20th June, two of the young were seen eating seed and one was seen eating insectivorous food on the 21st. I am very pleased to have bred this beautiful bird, especially as hardly any of them come over nowadays. I do not believe this pretty Weaver has been bred in Great Britain before.

THE MOUNTAIN BLUEBIRD

(Sialia corruoides)

Last year Mr. Delacour imported a few of these lovely Bluebirds, and kindly gave me two pairs. I consider them the prettiest of all the Bluebirds I have seen—the cock being all blue of a beautiful shade. I turned out a pair in each of my small aviaries, but last year they did not attempt to nest. This spring I gave them numerous nest-boxes of different shapes, pans, and a laurel bush to choose from,

and one pair chose a box that is in general use here, measuring 14 inches high by 8 by 8 inches with an entrance hole near the top $2\frac{1}{2}$ inches in diameter. The nest was built of dried grass and moss. Actual date of the laying of the first egg is not known. When examining all the boxes on the 5th June the nest contained six eggs. Five young were hatched off on the 17th June. On 22nd June a terrible smell was detected, and on examining the nest we found that four of the young were crushed at the bottom of the nest, but the remaining young one was growing fast. The young one was fed on gentles, live ants eggs, and mealworms. The ants eggs were thrown on the ground mixed with earth which was raked over several times a day so as to bring the eggs to the top. The male bird was the most attentive to the young, and he was always carrying food to the young, whereas the female usually had a good fill herself first. The young left the nest on 8th July. Colour of young, like female with exception of breast which is speckled as in the other Bluebirds. The young bird is a strong and healthy bird and very soon began to feed itself. As soon as this bird was fully reared the hen bird laid another four eggs and is incubating them now. As this bird is never seen here and is strictly protected I am more than delighted at having bred one, and hope to have another clutch soon. The other pair in another aviary has not attempted to nest. This I am sure is the first time this lovely bird has been bred in captivity.

THE YELLOW SHOULDERED WEAVER

(*Pyromelana capensis*)

My friend, Mr. Guy Falkner, gave me a few of these pretty Weavers a couple of years ago, and I turned out one pair in one of my large aviaries with dozens of other birds in it. They did not attempt to nest till this year, when they built a nest in a clump of pampas grass. The nest was rather a large spherical shaped one, built entirely of dried grass and lined with same. Two eggs were laid by the 27th May. Colour of eggs bluish white ground heavily speckled with reddish brown spots, and the size about the same as a Shamas egg. One young hatched on the 10th June. It left the nest on the 24th June. Only

the female was noticed feeding the young, and this only when mealworms were thrown to them. The young one is exactly like the female and the only way it can be distinguished is by a ring that was placed on its leg while in the nest. The other egg mysteriously disappeared from the nest. I am told this bird has never been reared successfully before this.

RARE BIRDS FROM PERU

By DR. E. HOPKINSON, C.M.G., D.S.O.

Our member, Alastair Morrison, came down from Cambridge last summer and forthwith departed for Peru to collect and study the wild life there. He has recently returned with his collections and is now working on them. Of these and his experiences generally we may, I hope, shortly have a full account from his pen. In the meantime I give a list of the rarer birds he brought home alive with notes as to previous importation, etc., as far as the records I have go.

Andean Teal, *Anas flavirostris oxyptera* Meyen. Delacour in AVICULTURAL MAGAZINE, 1933, 21, tells us that he saw this duck in the Berlin Zoo in 1932, and I think this is the only previous importation. The typical species, *A. f. flavirostris* V., has been in the London Zoo, according to the list of animals kept (Low, 1929).

Puna Teal, *A. versicolor puna* Tschudi. *Versicolor* used to be fairly commonly imported, but then disappeared till about 1935; this is a first arrival of *A. v. puna*.

Crested Duck, *A. specularioides alticola* Méné. Another first arrival, though the typical race (from Chile southwards to the Falklands) has once been in the London Zoo, and once at Berlin.

Andean Goose, *Chloëphaga melanoptera* (Eyton.) Rare, but has been at the Zoo and elsewhere, and has been bred in captivity.

Andean Ruddy Duck, *Oxyura ferruginea* (Eyton). One of the Stiff-tailed Ducks: never imported before.

Ridgway's Ibis, *Plegadis ridgwayi* (Allen).

Andean Gull, *Larus serranus* Tschudi. Both these also new.

Resplendent Lapwing, *Ptiloscelys replendens* Tschudi. Another

first arrival in Europe, but has, I think, been imported for American collections.

Whiteley's Ground-tyrant, *Agriornis s. insolens* Scl. The typical race, *A. s. solitaria*, Scl. has been in the London Zoo (one specimen in 1932), but this is the first arrival of *insolens*.

Sharpe's Yellow-rumped Ground-finch, *Pseudochloris u. sharpei* Berl. and Stolzmann. New. Common in the Puna, *teste* Morrison.

All the above came from the Andes, 14,000 feet up, in the Lake Junin district, where the collector made his headquarters. The next three were collected on or near the coast.

Peruvian Brown Grosbeak, *Neorhynchus d. masesus* (Bp.). Capt. Hammond had a *Sporophila*-like bird for a year or more, about 1930, which had been identified at the Nat. Hist. Museum as "*Neorhynchus* ? species". I saw it; it was rather different from the birds brought by Morrison, who has kindly given me a true pair. Another was mentioned in our pages (1931, 227, 289) as having been seen in a German collection, and this bird was, I believe, Capt. Hammond's. Except for this, this consignment is quite new.

Streaked Saltator, *Saltator striatipectus* Lafr. There were two in the Zoo in 1908, "new," and the only previous arrival.

Bonaparte's Warbling Finch, *Poospiza bonapartei* Scl. Also new. A few other species of this genus have arrived within the last year or two, and one, *P. whitei*, was bred by Allen Silver in 1937: see AVICULTURAL MAGAZINE, 1938, 98.

BREEDING OF THE NEW GUINEA RED-SIDED PARROT (*ECLECTUS PECTORALIS* P. L. S. Müller) IN CAPTIVITY IN COLOMBO, CEYLON

By W. C. OSMAN HILL, M.D.

I have kept *Eclecti*¹ of various species for the past six years and have found them very delicate when first imported but hardy when fully acclimatized. Individual male birds occasionally make good, tame, and

¹ I am aware that this generic title is not valid according to the strict rules of zoological nomenclature, but the name *Lorius*, Boddaert, 1783, is provokingly inappropriate and I cannot bring myself to use it.

intelligent cage birds, but the females are almost invariably sullen and spiteful, though I did have one female *E. corneliæ* that became tame enough to handle and present her head to be scratched.

This same Cornelian Eclectus was later put into an aviary with a pair of the New Guinea species (*E. pectoralis*) early in 1934. In the following year they were all transferred to a larger aviary 18 feet long by 6 feet wide and 9 feet high, with some protection behind and provided with some old soap boxes with holes in one end, near the top, to serve as nest-boxes. The nests were all in the sheltered part of the cage. The female Cornelian almost at once showed inclination to go to nest, but, curiously enough, the male took no notice of her, being too busy bestowing his attention on the female of his own kind, who persistently refused to go to nest, despite the encouragement of her partner. The Cornelian female was sitting on three eggs in January, 1936, but two of these were stolen in the middle of the day by a Rat Snake (*Ptyas mucosus*), after which mishap the aviary had to be rendered snake-proof. The remaining egg, and all the later ones she laid proved infertile, but she persistently sat on them, spending most of her time in the nest-box, until May, 1937, when the female *E. pectoralis* decided that she would like the same nest-box. This decision resulted in some serious bickering between the two females, and, if I had used better judgment, I should have removed the *E. corneliæ*, which was the more valuable bird. But I did not. Instead, I placed an extra nest-box in the aviary in the hope that the other female would take a fancy to it. But she did not; with the result that the *E. corneliæ* was killed by the *E. pectoralis* in the nest-box during the night of 9/10th May, 1937.

Having cleaned out the nest-box, it was replaced. There were now in the cage only the pair of New Guinea Eclecti. The female took to her stolen nest and was sitting steadily within a couple of weeks from the calamity related above. She has continued to sit steadily ever since, and during that time has reared three families, each consisting of a single bird, and is at present engaged in dealing with a fourth. She is very solicitous for her eggs and her babies, and will sit in the box even it is taken down for the purpose of repairs, which has happened on one occasion when a hole was found in it, through which her eggs kept falling out and getting smashed.

As far as I have been able to ascertain, the incubation period is between six and seven weeks. Although the nestlings are very silent as a rule, they occasionally make a faint squeaking noise, and the first time this was heard was on July 1st—seven and a half weeks after the death of the Cornelian Eclectus. This squeak has been heard at least once with all the broods so far produced. The babies remain in the nest until they are fully fledged, making a dramatic appearance beside their parents, whom they almost approach in size and beauty of plumage. This gives them three to three and a half months in the nest after hatching. The mother's habits suddenly change when her eggs have hatched. Whereas she sits tightly during the incubation period, rarely leaving the nest, and being fed by the male, once the babies are out, she comes out more frequently and for longer periods. She still has to be fed by the male, but whilst this is being done she makes a peculiar guttural sound, repeated many times as if demanding the job to be speeded up so that she can carry the nourishment to her family, which, when the male has disgorged sufficient, she promptly does. This process is repeated every quarter of an hour or twenty minutes for the first week or two, but thereafter, it slackens off, and the female takes some food herself from the seed-tin, in addition to what she receives from the male.

Eggs.—The eggs are of the usual type among Parrots, rather rounded and pure white in colour. They are about the size of a pigeon's egg, but more rounded and less glossy. They are thus rather on the small size considering the size of the bird.

The Newly-hatched Young.—This has not yet been seen, as I have never disturbed the female by peeping into the nest when she has a baby within. I presume, however, that the young are hatched naked, as in other members of the family.

The Fully-fledged Young.—Although *Eclecti* have been bred in captivity before on at least two occasions, according to Tavistock (1929), once in Germany and once in Perthshire, Scotland, no certain record seems to have been made regarding the occurrence or otherwise of sexual dichromatism in the newly-fledged young. The German record seems to be the same as the one mentioned by Russ as that of Frenzel of Freiburg. Anyway, I can now positively affirm that the sexes are

distinct from the first plumage, the males resembling their father and the females their mother. The young bred in my collection so far are as follows :—

	Date of appearance at nest entrance	Sex
1	31st August, 1937, 8 a.m. . .	Female
2	28th December, 1937, 7 a.m. . .	Male
3	19th April, 1938, 11 a.m. . .	Female

The baby does not leave the nest on first looking out from the entrance hole. In two cases it was not till the following day, but in the last case, the baby crept out the same day. The baby goes back to the nest-box to sleep at night for a night or two, but afterwards roosts on a perch beside its father or elder brothers and sisters.

Although in general colour the newly fledged young resemble their parents, according to sex, there are differences, rendering the young easily distinguishable. In both cases the young is not quite so large as its parent, though this was more noticeable in the case of the young male than with the two female babies. The other differences concern coloration and are different in the two sexes, as follows :—

Female.—The red in the plumage, especially on the neck and breast, is duller than in the adult. The baby lacks the ring of blue feathers round the eye. There is less yellowish colour in the tips of the tail feathers. The beak is patchy, being a dirty yellow with black smudges. The iris is dark throughout, thus lacking the hawk-like aspect produced by the creamy-white iris of the adult female. The beak gradually blackens to a uniform black tint, but the light iridial ring does not appear till the bird is about a year old. The same applies to the ring of blue feathers around the eye.

Male.—Green like the adult, but the hair-like feathers of the head, neck and breast are duller and coarser in appearance. The red on the flanks is present and may extend in a patchy manner on to the tips of some of the breast feathers. In the single male so far produced, this condition was present in the left side only. The bill is patchy, as in the young female, but is more black than yellowish, the black areas

gradually being lost till the adult condition is attained. The iris is uniformly dark, as in the young female.

In conclusion I should add that the breeding of *Electus* seems to be a continuous process once having begun. As soon as one baby leaves the nest the mother proceeds to deposit another egg and to commence its incubation. She has no resting period between broods. It may even occur, though I have not proved this, that eggs are laid before the previous brood has left the nest, so that the latter assist in the incubation of the next brood.

BREEDING OF MITCHELL'S LORIKEET (*TRICHOGLOSSUS MITCHELLI*, G. R. Gray) IN CAPTIVITY

By W. C. OSMAN HILL, M.D.

Mitchell's Lorikeet (*Trichoglossus mitchelli* G. R. Gray) is one of the rarer Streaked-headed Lories and is believed to come from Lombok, thus being the most westerly of the whole family in its distribution. Specimens are not often come across in captivity, and, as far as I can gather, it does not appear to have been bred; hence my putting on record the following details.

I commenced with six birds of this species, purchased on board a ship in Colombo harbour in April and May, 1932. They were put into a large flight cage with some Swainson's Lorikeets (*T. moluccanus*), but neither they, nor the Swainson's, had made any efforts to nest till 1937. By this time the Mitchell's had dwindled to a single pair, having been killed off, one at a time, by injuries from other birds or from unknown causes. The last two, however, were suspected to be a true pair on account of their behaviour, and the presumed male was noteworthy for his deeper scarlet chest. For a period during early 1937 they were the sole occupants of the aviary and the female made several ineffectual attempts at nesting in hollowed stems of coco-nut palms, the centre of which had begun to go rotten, so that she was able to excavate quite a long tunnel. All the efforts came to nought and, as no further

indication of nesting was evident, I placed a pair of Swainson's in with them again.

In October, 1937, however, they were again prospecting for a suitable nesting site, and by the end of that month the female was believed to be sitting on eggs in an artificially hollowed tree stem, 18 inches long, with a hole, 3 inches in diameter, near the top. Except at night, the mother bird spent little time on the eggs, and it was not until 29th November, when babies' voices were heard in the nest-box, that one could be really certain that a family was in fact being reared. I looked into the nest-box, with the aid of a torch and mirror, on 14th December, and saw one baby, of fair size, covered all over with grey down. I should not have interfered to this extent, had it not been for the fact that I was forced to enter the aviary to catch up the Swainson's as the parent Mitchell's were worried for their family and were boldly attacking the innocent Swainson's. As I happened to be in the cage, therefore, I decided to peep in the nest-box, with the above result.

All went well after the removal of the Swainson's, and, as the Mitchell's did not mind my looking in their nest, I had several peeps at intervals, and found that the grey down was gradually replaced by coloured contour feathers, and that the flight feathers had made their appearance. The beak, however, appeared black, not red like that of the parents.

A baby appeared at the nest hole on the 10th January, 1938—almost three months after the parents had first been noted to become inclined to breed. It stayed at the nest hole for some time and was fed by its mother in this position. It did not leave the nest till the fourth day, on which day also a second baby peeped out. This one left the nest two days after, and was apparently the last of the brood.

Characters of the Fledgling.—Both babies were alike in size, form, and colour. They were smaller than their parents, but not markedly so. The heads were more affected than the trunk. The most striking difference was the uniformly black beak. The head was sepia-brown, with a greenish tinge, looking very dull in comparison with the purplish-brown of the adult bird. The scarlet on the neck and chest was much duller than in the adult. The voice was also very different, being a shrill "cheep".

In ten days the beaks of the young birds were beginning to show some red, this commencing as a median stripe on the culmen. In another week some reddening was taking place on the sides. They were still being fed by the parents at this stage. At the age of six months the heads have not changed colour.

Further Breeding.—On the 5th March, 1938, the mother Mitchell's Lorikeet was back in the same nest-box, but spent comparatively little time there during the day, though both she and the male spent the night there. A baby's voice was again heard about the middle of April, and on the 18th of that month a baby covered with grey down was seen in the box. Its voice was heard at night, and was easily distinguishable from the parents. The two older babies were roosting elsewhere. On 3rd May the new baby was again seen, and found to be well feathered on head and body. It appeared at the nest hole on the 8th May, but went back again not to reappear till three days later. It left the nest altogether on the 18th May, and appears to be the sole member of the brood. Its characters agreed with those already described.

The mother is again at the nest at the time of writing (mid-June, 1938), which means that, here again, as with the *Eclecti* I have already written about, breeding, once started, seems to be almost a continuous process, but there is a definite, though short, resting period with the Lorikeets, whilst the mother bird is not tied down to the nest nearly to same extent as with the *Eclecti*.

REVIEW

STUDIES IN THE LIFE HISTORY OF THE SONG SPARROW. Transactions of the Linnæan Society of New York. Vol. IV. 1937. By MARGARET MORSE NICE.

Do you remember the publication of L. E. Howard's researches on the Willow Wren in *The Zoologist*; prelude to his later books? If so, you must get Margaret Morse Nice's *Studies in the Life History of the Song Sparrow*: if not, get it and begin your education in bird behaviour. The book is so written, it needs no previous knowledge, with references by the way to other species and such a Bibliography as will tempt you down many a by-path.

The author, by means of elaborate ringing and by the convenient individuality of the cock Song Sparrow's song, has been able to keep track of individual birds for a number of years to an almost incredible extent, such as makes her results unique: and this although the boy Ohioan harries her Sparrows along with the "English" for sake of State bounty, whilst the unemployed are set to remove her beloved thickets and deposit town refuse in their place. It makes one gasp.

In warning please note the express statement—Song sparrows not only abound, or did; they do not readily desert their nests and show great attachment to their homes. They must need it all, though obviously M. M. Nice has a way with birds. The havoc promiscuous adoption of her methods might spread! (Consisting of goodness knows how many varicoloured anklets on each leg, with trappings for weighings and wing measurements—moreover the strain for years on the human, let alone the bird! And at that, some nests have evaded the authoress.) Nests badly hidden were found more liable to destruction by "predators"; and the removal of natural cover is reducing this particular population (Interpont. Ohio—*Melospiza melodia beata*) from year to year; and with thinning, comes intenser parasitism by the Cowbird (*Molothrus ater ater*) who also has a homing instinct and a chapter to himself.

Male Song Sparrows have very strong territorial instinct. Half of them keep to their territories all winter, one at least eight winters, though they only fight about it on fine days—they take in visitors, winter only, free—and not at all while in moult. The other half go south with four-fifths of the females. This makes remating of birds in successive seasons rare, as late returning hens turn up much too late—only eight cases, less than 4 per cent.

Migration or residence has nothing to do with age or inheritance—behold genealogies. A brother and sister from the same nest resided a winter and mated in spring, only one other instance being given among wild birds, a case of Downy Woodpeckers.

One male migrated two winters, remained the third. Three males and one female resided one winter, migrated next, and returned in spring. Two males resided two winters, migrated third, and returned in spring. No differences were found between migrants and residents. Bad seasons, and motors, levy toll on migrants.

Weight is at a minimum in fall; increases from December to maximum in January; decreasing to standard weight in April.

Spring migration is in an early (late February) flight, and a distinct one later. Some birds consistently arrive early or late; some vary. Warmth has a strong influence on arrival dates of earlies, but it takes marked cold to delay the lates. Young hens arrive late their first spring, but do better in following years.

The ceremonial proclamation of territorial rights, in which song plays the chief part, does not occur in years with a depleted population. Young males warble continuously, but on staking a claim assume the adult song at once and never warble again. Singing in January and February is correlated to temperature but not sunshine. Maps of the district show the same males holding the same territory from year to year, or closely adjoining. Females return to the same territory or settle close by. Maps show young males and females returning to within an average 280 and 270 metres of their birthplace; of interest to fauna-preservers. There are maps of nesting sites for several generations.

Cocks arriving late retake their territories from any first year residents that have settled on them. Late hens usually find the old place occupied, but there are always mateless cocks. They are said to pay no attention to beauty in plumage or song, easily discernible in their degree, in the male; or even desirability of residence. Beauty and melody are prerogative of the cock Sparrow. Cocks make bigamous advances about their boundaries, but they only make the hens furious: unless mischance has befallen their mates a young cock may fail to establish himself his first spring but return next year and succeed. A young hen builds her first nest as efficiently as her last. The ages are given of seven birds on laying their first egg. The start of egg laying depends on temperature alone.

And much more—weights and numbers of eggs in successive clutches—percentages of hatching and of fully fledged young population problems—but this first volume is only a breaking of the ground—a rough sketch of the Song Sparrow; detail is to follow in a second volume. May it be bound in a permanent cover.

ORNAMENTAL PHEASANT SOCIETY NOTES

The Zoological Society very kindly lent the Ornamental Pheasant Society their Offices for the Society's Summer General Meeting, which was held on 21st July.

The Meeting was a success and there were very few of the thirty-one members present who did not express their feelings on some of the important subjects on the Agenda.

After Monsieur Delacour had been elected to the Chair and the Secretary had read the Minutes, a discussion followed on the possibility of establishing a "Standard of Perfection" for Pheasants. The subject was raised as the result of a letter to the President from Mr. W. J. Parsonson, and it was eventually decided that the Society should complete a paper on the Golden and Amherst Pheasants, but the other species could not be definitely defined.

The meeting agreed that Mrs. Cawley's suggestion of the Society having its own Christmas Cards should be carried out. The nature of the card should be left for the Committee to decide later.

A subscription of 10s. was proposed by Mr. Beever. It did not meet lively support and was turned down after obtaining 7 votes out of 31. Whilst on the subject of subscriptions the Society passed a proposal that annual subscriptions should be paid on 1st January of every year.

The important subject of showing was next on the agenda and Mr. Bennett pointed out to the meeting that there was a deficiency of rules for members to follow. This will be corrected, as Major Elliot Benham kindly offered to post every possible exhibitor a list of rules to apply to every patronized show.

The only possible improvement for the *Journal* was suggested by Miss Knobel. In future the list of members' names will have the initials after the surname instead of before.

The meeting offered its apologies to Monsieur Malisoux for omitting his name from the list of editors in the last *Journal* and also passed a vote of thanks to the Secretary and Editors.

After a long discussion the meeting passed Major Elliot Benham's suggestion of the Society publishing a Bulletin every other month. He agreed to become the Editor of this Bulletin in conjunction with Mr. P. J. Lambert. The paper will contain small articles, news of the Society, and space for members advertisements.

The question of the importation of Pheasants brought a lot of speakers to their feet. Rev. Venner was prominent in this discussion and on the motion of the Chairman it was decided that the best the Society could do was to support the International Society for the Protection of Birds.

This very productive meeting was closed after a hearty vote of thanks to the Chairman.

A pleasing luncheon followed at which there were forty-one members present.

JEROME F. LAMBERT.

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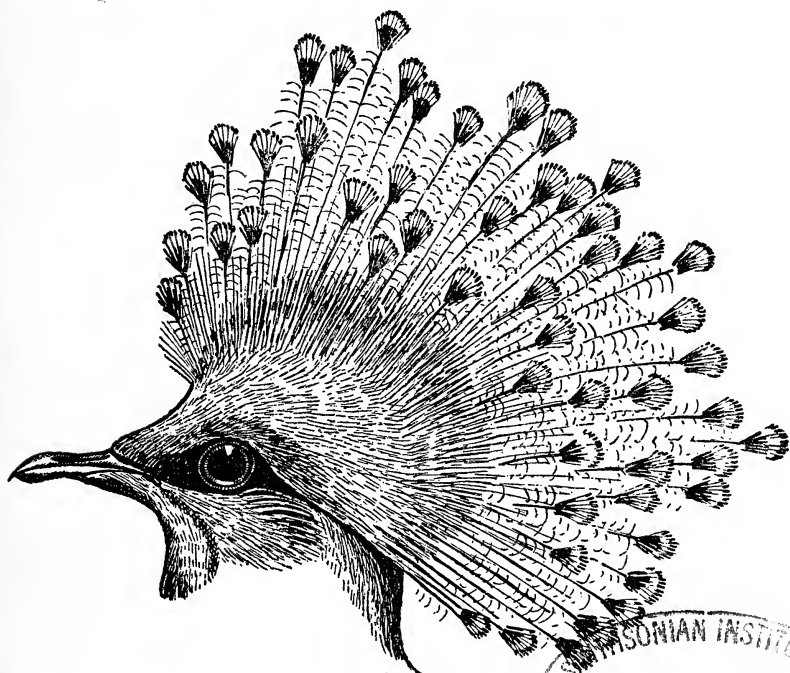
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THE AVICULTURAL MAGAZINE



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FOUNDED 1894

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REEVE'S THRUSH (*Turdus reevei*).

THE AVICULTURAL MAGAZINE

THE JOURNAL OF THE
AVICULTURAL SOCIETY

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REEVE'S THRUSH

Turdus reevei

By P. H. MAXWELL

We have in the Zoological Gardens of London a most interesting bird from Ecuador called Reeve's Thrush—it has been given various scientific names by different naturalists. I have chosen to use here the most simple one. The sexes are similar in this bird. The following is a description of the bird :—

The general colour of the upper parts is slate grey, shading into dark slate on the head ; lores brown, ear coverts dark slate grey, no trace of eye-stripe ; wings brown, the wing coverts, innermost secondaries, and unmargined portions of the outer webs of the quills, slate grey ; tail brown, the central feathers and outside web of other tail feathers slate grey. Chin and throat nearly white, streaked with nearly black ; rest of underparts pale brownish grey, shading into nearly white ; axillaries and wing-coverts pale brownish grey ; inner margins of quills pale slate grey. Bill bright yellow. Wing with third, fourth, and fifth primaries nearly equal and longest, second primary intermediate in length between the seventh and eighth, bastard primary 1.1 to 0.95 in. Legs, feet, and claws pale yellow. Length of wing 4.68

to 4·45 in., tail 3·93 to 3·55 in., culmen 0·9 in., tarsus 1·25 to 1·21 in. The immature bird is dark olive brown, streaked with buff down centre of feathers, which have also triangular spots at the tip of the wing coverts and inner secondaries. The under surface of the body is brownish buff, mottled with black bars at the end of the feathers. The under wing coverts and axillaries are orange buff. Bill brown towards the tip. Total length 8 inches, culmen 0·91 in., wing 4·6 in., tail 3·3 in., tarsus 1·25 in. It has been placed by scientists in the genus *Cossyphopsis*; nothing seems to have been recorded about its habits. The habitat of the bird is the arid tropical zone of Western Ecuador and Northern Peru.

BREEDING BRITISH BIRDS

By RICHARD JAMES

The Summary of Breeding Records, published in the July issue of the AVICULTURAL MAGAZINE should be appreciated by all fanciers interested in the study of birds in captivity. For surely every breeder, or would-be breeder, will appreciate having so much authentic material to work on. The preceding article, written by the recorder, gives food for much thought, and is not only worthy of comment but comment would seem to be necessary in justice to the vendor, recorder, and the breeder—especially the latter.

With regard to the “familiar advertisements of aviary (or cage) bred Britishers being offered for sale at 9s. a dozen”. Now, surely, no fancier with any experience at all, would take such an advertisement seriously; as a claim to breeding, indeed, it is doubtful if the vendor would expect to be taken seriously. I well remember my first visit to a famous bird market. A vendor was proclaiming: “Bullies, half a crown each, all bred in my own aviary.”

I suggested to the man in a jocular tone: “Is not your aviary the wide, wide world?” To which the vendor promptly replied: “You have guessed right, governor.” Anyway, it is well known that Dr. Hopkinson is far too conscious of the possibilities and probabilities with regard to breeding to be likely to accept mis-statements or

mistakes for facts. I would be the first to admit that the author of *Breeding Records* cannot afford to be incautious, and do not know of a more cautious and capable man in that particular direction. Even so, I venture to suggest, a more malicious pretender or wiseacre might well have been given as an example rather than the man who will offer aviary-bred birds for sale at 9s. per dozen.

I have not been so fortunate as to meet a fancier who claims to have bred Nightingales, but have been fortunate enough to meet such a one capable of doing so.

I have, however, investigated more absurd claims, and am willing to admit having enjoyed such experiences, and regard such experiences as part of my incomplete education. The ideal record suggested by Dr. Hopkinson should be possible with a little well-deserved co-operation from other fanciers.

Most of our popular Finches have been bred and, in many instances, have been bred from captive-bred birds. One must hesitate to offer details for an ideal record unless other breeders involved will give an authenticated report of their co-operation. At the moment I may, however, state Chaffinches have been bred in my aviary into the third generation, but have never succeeded in rearing a full brood. A pair of Goldfinches bred by myself in 1937 went to nest in the aviary of Mr. A. E. P. Conant in 1938. The young in this instance were not reared because the aviary was too crowded.

This seems a fitting opportunity to remark that breeding results must be poor if Zebra Finches are kept with other breeding pairs. With regard to the four questions, which if answered would help towards an ideal record, we must bear in mind that no claim could be of any real value or help unless duly authenticated and particulars given. Therefore I must be content to state: "I have bred dozens of Goldfinches, and many of these birds are still living in the aviaries of other fanciers, and if they have not reared young themselves, then their present owners are more likely to be at fault than are the birds."

Goldfinches invariably rear full broods and the chicks uniform as to size. Details with regard to the breeding of Buntings, Warblers, Flycatchers, and Waders would seem to be most unsatisfactory, and therefore there is scope for the maker of history. My own activities

are at present restricted ; at the moment a pair of Goldfinches are incubating their third round this season. This is quite usual with captive Goldfinches. The first brood, all reared "on purchased food" (for the first time in my experience), are all quite healthy birds, and it is hoped these chicks will themselves rear young for, and in the aviaries of, fellow members. The said birds were reared almost entirely on soaked teazle, with the addition of soaked niger and soaked sunflower-seeds. If sunflower-seeds are omitted from their diet then the niger must also be withheld.

The second brood, for some unknown reason, seemed poor specimens ; three of the chicks seemed to have rickets when they left the nest, which was two days too soon, or too early ; even so one of the weak chicks has quite recovered and is now self-supporting. This is as well, because the third brood are almost due to hatch and no difficulty is anticipated in rearing the last brood, as by that time an abundance of ripe thistle heads should be obtainable, and at such times the purchased seeds are not necessary. From the point of view of the student, the first brood (fed on purchased food) are more interesting material than are the last. I cannot quite understand why many fanciers insist on liberating their captive-bred birds. The interest such birds are likely to afford is by no means exhausted when they have reached the adult stage ; apart from the fact that it is now more difficult for many fanciers to obtain their breeding pairs, to breed with captive-bred birds offers scope for more extensive observations. It is, of course, better to liberate them than hand them over to a fancier who will not make a serious attempt to breed with them.

Finch breeding would seem to be trivial when compared with Wader breeding or breeding migratory softbills, and anyone ambitious enough to wish to breed the latter would be well advised to acquire hand-reared specimens as possible breeders. The man who has enough knowledge, patience, and ingenuity to hand-rear Warblers, Flycatchers, and Chats is the man who is worthy of profound respect. I have been privileged to call on Mr. A. R. Phillips, of Harefield, on two occasions during the last few weeks, and was amazed with admiration at this young man's seemingly casual yet efficient method of hand-rearing such birds. Such a fancier is worthy of mention in our

Magazine and his capabilities worthy of infinite respect. Mr. Phillips is singularly gifted, and takes anything in his stride—Finches, Flycatchers, Warblers, and Wagtails. One may see such birds as Crows, Starlings, Shrikes, Wagtails, Chats, Nightingales, Wrens, Thrushes, and Wading birds, all finger tame and in perfect condition. A few years ago an article was published in *Cage Birds* on breeding the Wren. The article, complete and full, was written by the breeder. I, for one, am sorry not to have heard more of this fancier's activities, since with so many of us our enthusiasm does exceed our capabilities. If any of our members insist on keeping their findings to themselves we are likely to fall short of our objective. May the writer suggest it would be helpful if fanciers would hand over surplus birds to other members.

THE BREEDING OF LEADBEATER'S COCKATOO

By kind permission of Mrs. Dunn

By A. MARTIN

During the late summer of 1936 Mrs. Dunn purchased a very fine pair of the above species. As I had never had a true pair of these birds under my care before I was very anxious to see what they would do in the way of breeding. Early in 1937 a large aviary, specially built for them, was erected. During early March a natural log was placed in their flight, and very quickly they became interested. During April eggs were laid and two young were hatched. The birds seemed to be feeding very well and I had great hopes of having young Leadbeaters for the first time ; but disaster was in store for me. Going into the enclosure one morning when the young were about fourteen days old, I saw two young Leadbeaters lying on the grass with their heads almost severed ; it was no doubt the work of the old hen. So ended our first try at breeding Leadbeaters. About three weeks later they again went to nest, and this time I thought I might perhaps try my hand at feeding the young myself if only the parents would rear them to about ten or

twelve days old. The young were duly hatched, as I could hear faint squeaks coming from the nesting log. After two days, however, they were thrown out of the nest, and one evening I found three dead. So ended our hopes of young Leadbeater's for 1937, and I said to myself, as I have said many times before, now we must wait until next year ; but it was a sad disappointment.

Then came the spring of 1938 and during early March the old Leadbeater's began using the nesting log which had been left in their flight all the winter. I made up my mind, however, I would not even take a peep.

It was during middle April that one morning I heard the unmistakable sound of young coming from the log. The old birds had by now become very savage, attacking anyone who entered, even to feed them, and more than once I had to defend myself as they were really dangerous. All their food had to be thrown through the wires on to the floor, but I think this served a good purpose, for they seemed very fond of germinated seed and fed their young quite freely with it. As time went on I wondered if the same thing would happen as in the previous year, and that they would murder the young again ; but they seemed to have amended their ways, and were quite good parents. At about seven weeks I saw a beautiful young Leadbeater peeping out of the log, and at eight weeks he was out of the log and flying strongly. Three days later two more were out, and I have never seen a more beautiful sight as they sat side by side with their parents.

After they had been out about fourteen days the old hen attacked one of the young so badly that I had to remove all three. I thought I should lose the one that had been pecked and bitten so badly. It was covered with blood, but happily after it had been caged a few days it made a complete recovery, and all three are now doing well and fending for themselves, and the old birds seem to be going to nest again. The breeding of these birds has given me great pleasure, and I firmly believe that this success was partly gained by throwing the seed on the floor.

BREEDING RECORDS : SUMMARY II

(Continued from p. 197)

By Dr. E. HOPKINSON

WEAVERS

111. (Pintailed Whydah ???)
112. (Paradise Whydah ???)
113. Shaft-tailed Whydah, *P. regia*. One record : Australia.
114. LONG-TAILED WHYDAH, *Diatropura progne*.
115. (Red-collared Whydah ?) and a *hybrid* on record, a. Red-collared × Yellow-backed Whydah, about 1915.
116. WHITE-WINGED WHYDAH, and a *hybrid* with the hen GRENADIER BISHOP. Australia, 1926.
117. Yellow-backed Whydah. One record : 1924.
118. Jackson's Whydah. One record, 1915.
119. Red-shouldered Whydah, *Urobrachya axillaris*. Abroad, and a *hybrid*, a. with the hen Yellow-backed Whydah : U.K. about 1916.
120. (Combasou.)
121. (Crimson-crowned Bishop.)
122. Black-bellied Bishop. One record : Germany, 1882.
123. GRENADIER BISHOP. Germany, 1873 ; U.K., 1912 and since.
124. ORANGE BISHOP, and *hybrids*, a. O.B. × Taha, and (b. O.B. × Canary ???).
125. CAPE BISHOP ("Kaffir Fink"), *P. capensis*, and a *hybrid* with the female Red-shouldered Whydah in France.
126. TAHA BISHOP : 1915, U.K.
127. NAPOLEON BISHOP.
128. Pokerhead Weaver, *Quelea erythrops*.
129. RED-BILLED WEAVER, *Q. quelea*, and the var. *russi*, RUSS'S WEAVER (130).
131. TWO-COLOURED MANNIKIN, *Spermestes b. bicolor*, and *hybrids* with hens of the a. African Silverbill, and b. Bronze Mannikin.
132. RUFOUS-BACKED MANNIKIN, *S. nigriceps*, and *hybrids* with the hen Bengalese.

133. DWARF MANNIKIN ("Bib Finch"), *S. nana*, and a *hybrid* with the hen Avadavat; one record, Australia.

134. BRONZE MANNIKIN, and *hybrids* with females of the a. Two-coloured Mannikin; b. RUFOUS-BACKED MANNIKIN; c. MAGPIE MANNIKIN; d. BENGALESE and a further cross; and ST. HELENA WAXBILL, 1931, U.K.

135. MAGPIE MANNIKIN, and *hybrids* with hens of the a. BENGALESE, and b. African Silverbill.

136. QUAIL-FINCH, *Ortygospiza polyzona*.

137. WEST AFRICAN QUAIL-FINCH, *O. atricollis*. Abroad.

138. FIREFINCH, and *L. senegala brunneiceps*, the BROWN-CAPPED FIREFINCH has also been bred (139).

Hybrids

a. Firefinch × SPOTTED FIREFINCH.

b. ——— × (Zebra Waxbill).

c. ——— × Grey Waxbill.

d. ——— × Lavender Waxbill.

JAMESON'S FIREFINCH, *L. rubricata jamesoni*. Two records; France and U.K., 1928 and 1935.

140. SPOTTED FIREFINCH, *L. rufopicta*, and *hybrids* with the female a. COMMON FIREFINCH.

141. GREEN AVADAVAT.

142. CUT-THROAT, and *hybrids* with hens of the a. RED-HEADED FINCH, b. Java Sparrow and Indian Silverbill.

143. RED-HEADED FINCH, *Amadina erythrocephala*, and *hybrids* with the female a. CUT-THROAT, and b. Java Sparrow (white var.).

144. DIAMOND SPARROW, and *hybrids* with the hen ZEBRA FINCH (a); several times in Australia.

145. PAINTED FINCH, *Emblema picta*.

146. MELBA WAXBILL, and *hybrids* with the hen CORDON-BLEU.

147. AURORA WAXBILL.

148. (Red-faced Finch, *Pytelia afra*.) A *hybrid* record only with the hen Aurora Waxbill.

149. ZEBRA-FINCH, and *hybrids* with females of the a. BICHENO

FINCH ; b. Silverbill (African) ; c. CHERRY FINCH ; d. LONG-TAILED GRASSFINCH ; Parson Finch (in Australia) ; Masked Grassfinch ; e. Rufous-tailed Grassfinch ; and f. (St. Helena Waxbill).

150. BICHENO FINCH, and *hybrids* with the hen ZEBRA-FINCH.

151. BLACK-RUMPED BICHENO FINCH.

152. PETERS' SPOTTED FIREFINCH, *Hypargos niveoguttatus*, U.K. and Australia, 1935.

153. DUFRESNE'S WAXBILL. U.K., 1934 ; Australia later.

154. AVADAVAT, and *hybrids* with the hen Zebra Waxbill.

155. ZEBRA WAXBILL, and *hybrids* with females of the a. AVADAVAT ; b. (Firefinch) ; c. (St. Helena Waxbill) ; and CORDON-BLEU. U.K., 1934.

156. ORANGE-CHEEKED WAXBILL, and *hybrids* (both abroad) with hens of a. the St. Helena Waxbill ; b. the Grey Waxbill.

157. JAVA SPARROW ; most commonly the white variety, and *hybrids* with females of a. the Cut-throat ; b. SILVERBILL ; BENGALESE and (Nutmeg Finch).

158. Maja Finch (White-headed Nun), and the following *hybrids* ; Maja \times a. (Cut-throat) ; b. (Striated Finch) ; c. Bengalese ; d. Chocolate Mannikin ; e. Chestnut Finch ; f. Parson Finch.

159. (Three-coloured Mannikin.) *Hybrid* records only with females of a. the BENGALESE ; (Chestnut Finch) ; and (Zebra Finch).

160. CHOCOLATE MANNIKIN (Black-headed Nun), and *hybrids* with females of a. the Maja Finch ; b. CHESTNUT FINCH ; c. NUTMEG FINCH ; d. BENGALESE.

161. CHESTNUT FINCH, *Munia castaneithorax*.

Hybrids

Chestnut Finch \times a. Maja Finch ; b. (Chocolate Mannikin) ; \times (Pectoral Finch) ; \times NUTMEG FINCH ; \times c. (Striated Finch) ; \times d. BENGALESE (Whitley, 1929, India and U.S.A.) ; \times e. SILVERBILL (Indian) ; \times Zebra-finch (in Australia) ; \times MASKED GRASSFINCH (Australia).

162. YELLOW-RUMPED FINCH, *M. flaviprymna*. First, U.K., 1906 ; since then in France. etc. Also *hybrids* with hens of the BICHENO FINCH and CHESTNUT FINCH, both in Australia.

163. NUTMEG FINCH, and *hybrids* with females of the a. DWARF MANNIKIN, b. Bronze Mannikin ; c. (Striated Finch ?) ; d. BENGALÉSE ; e. SILVERBILL.

164. PECTORAL FINCH, and one record (1927) of *hybrids* with the hen Chestnut Finch.

165. STRIATED FINCH, and *hybrids* with hens of the b. Chestnut Finch ; c. Sharp-tailed Finch ; e. Maja Finch ; f. Nutmeg ; h. Parson Finch ; g. Silverbill.

The crosses STRIATED FINCH \times d. BENGALÉSE and a. Black-rumped Striated Finch are also on record, but these are not true hybrids.

166. (Black-rumped Striated Finch, *U. s. leucogastroides*.) See No. 165.

167. BENGALÉSE, and *hybrids* with hens of a. and b. Striated and Sharp-tailed Finches, which are both only *intra-species* unions ; real hybrids on record are : c. B. \times Nutmeg Finch ; \times MAJA (in Japan) ; d. B. \times Two-coloured Mannikin ; e. B. \times (Bronze Mannikin) ; f. B. \times DWARF MANNIKIN (U.K., 1913) ; g. B. \times Chestnut Finch ; h. (B. \times Canary ? ?).

168. SHARP-TAILED FINCH, and crosses with hens of the a. Striated Finch ; b. BENGALÉSE and both Silverbills, African and Indian.

169. CHERRY FINCH ; "Plumhead." *Aidemosyne modesta*.

Hybrids

CHERRY FINCH \times ZEBRA FINCH (Japan about 1927 ; Australia later).

\times a. MASKED GRASSFINCH (U.K.).

\times LONG-TAILED GRASSFINCH (Australia).

\times Bichenó Finch (Australia).

170. INDIAN SILVERBILL, *Euodice malabarica*, and *hybrids* with females of a. the Dwarf Mannikin ; b. Chocolate Mannikin ; Cherry Finch (in Japan), and ZEBRA-FINCH (U.K.).

171. AFRICAN SILVERBILL, *Eu. cantans*, and *hybrids* with the female a. Indian Silverbill ; b. BRONZE MANNIKIN (U.K.) ; c. Zebra-finch ; d. Java Sparrow ; e. Maja Finch ; f. Nutmeg Finch ; g. (Striated Finch ?) ; h. BENGALÉSE ; i. Sharp-tailed Finch ; j. (Sydney Waxbill) ; k. St. Helena Waxbill ; l. Grey Waxbill ; m. (Olive Cuba Finch ? ?).

FIRE-TAILED FINCH, *Zonæginthus bellus* (in Australia).

172. SYDNEY WAXBILL.

173. RUFOUS-TAILED GRASSFINCH, *Bathilda ruficauda*, and *hybrids* with the hen a. Zebra-finch.

174. LONG-TAILED GRASSFINCH (both *acuticauda* and *a. hecki*), and *hybrids* with hens of the a. MASKED GRASSFINCH ; b. BLACK-RUMPED BICHENO ; Zebra-finch ; BENGALÉSE (U.K., 1937) ; LONG-TAILED GRASSFINCH (U.K., 1930).

175. PARSON FINCH, *Poephila cincta*, and *hybrids* with females of the a. LONG-TAILED GRASSFINCH ; b. this hybrid with the hen Rufous-tailed Grassfinch ; PARSON \times ZEBRA-FINCH ; d. \times Bengalese ; \times (Maja).

176. White-eared Grassfinch, *P. leucotis*. (Abroad.)

177. MASKED GRASSFINCH, *P. personata*, and *hybrids* with the hen Zebra-finch (in Australia).

178. GOULDIAN FINCH, *Gouldæornis gouldiæ*. Both red- and black-headed forms are commonly bred and inter-bred, the yellow headed very very occasionally. No *hybrids* yet recorded.

179. PINTAIL NONPAREIL, *Erythrura prasina* and *hybrids* with hens of a. the Parrot Finch ; b. Silverbill are recorded, both abroad.

180. PARROT FINCH, *Acalanthe psittacea*, and *hybrids* with females of a. Peale's Parrot-finch ; b. TRICOLOURED PARROT-FINCH ; c. Pintail Nonpareil ; d. Sydney Waxbill ; e. Parson Finch.

181. PEALE'S PARROT-FINCH, *Amblynura pealii*.

ROYAL PARROT-FINCH, *A. regia*. First U.K., 1935.

182. TRICOLOURED PARROT-FINCH, *Lobospingus trichrous*, and the sub-species *L. t. goodfellowi* and *L. t. cyaneifrons* are also on record as bred ; also the following *hybrids* : *A. psittacea* \times *L. trichrous* ; *L. trichrous* \times the above hybrid, and vice versa ; and these *hybrids* have also been bred *inter se*.

183. CRIMSON FINCH, *Neochmia phæton*, and *hybrids* with hens a. the Rufous-tailed Grassfinch ; b. the Long-tailed Grassfinch ; DIAMOND SPARROW and SYDNEY WAXBILL : all in Australia.

184. ST. HELENA WAXBILL, *Estrilda astrild*, and *hybrids* with hens of a. the Grey Waxbill ; ORANGE-CHEEK WAXBILL (U.K., 1931) ; e. Cordon-bleu ; d. (Sydney Waxbill) ; c. (Silverbill) ; b. (Zebra-finch).

185. GREY WAXBILL, *E. troglodytes*, and *hybrids* with hens of the a. ST. HELENA WAXBILL; b. Crimson-rumped Waxbill; c. ORANGE-CHEEK WAXBILL; d. (Zebra Waxbill); e. (Firefinch).

186. (Crimson-rumped Waxbill, *E. rhodopyga*.) *Hybrid* records only: with females of the Grey and Orange-cheek Waxbill.

BLACK-CROWNED WHITE-FRONTED WAXBILL, *E. nonnula*, U.K., 1936.

187. Black-faced Waxbill, *E. erythronotos*. (Abroad.)

188. VINACEOUS WAXBILL, *E. vinacea*.

189. LAVENDER WAXBILL, *E. caerulescens*. *Hybrids* with the hen Firefinch are also on record abroad.

190. CORDON-BLEU, *Uræginthus bengalus*, and *hybrids* with females of the BLUE-HEADED CORDON (France, 1929), and (a. St. Helena Waxbill).

191. ANGOLA CORDON-BLEU, *U. angolensis*, and *hybrids* with the hen a. CORDON-BLEU (U.K., 1913).

BLUE-HEADED CORDON-BLEU, *U. cyanocephalus*, and *hybrids* with the hen Cordon-bleu.

VIOLET-EARED WAXBILL, *Granatina granatina*. South Africa, 1915; Germany, 1931; U.K., 1937.

192. SCALY-FRONTED WEAVER, *Sporopipes squamifrons*. One record: U.K., 1913.

193. Frontal Weaver, *S. frontalis*. One record: abroad, 1907.

194. (Buffalo Weaver, *Bubalornis albirostris*.) Abroad.

195. CHESTNUT-BACKED WEAVER, *Cinnamoptyx castaneofusca*. (Abroad.)

196. RUFOUS-NECKED WEAVER, *Sitagra cucullata*, and *hybrids* with hens of a. the Spotted-backed Weaver; b. (Half-masked Weaver and a further cross, c.); d. ("Transvaal Weaver").

197. (Great Masked Weaver, *S. c. abyssinica* (?).

198. (Spotted-backed Weaver, *S. spilonota*. A *hybrid* record only: with the male Rufous-necked Weaver.

199. BLACK-HEADED WEAVER, *S. melanocephala*. Two records: U.K. and U.S.A.

200. Loango Masked Weaver, *S. subpersonata*. Abroad.

201. Cabanis' Masked Weaver, *S. i. cabanisi*. Abroad.

202. LITTLE MASKED WEAVER, *S. luteola*.

203. (Black-fronted Weaver, *E. velata* ?)

204. (Reichenbach's Masked Weaver, *S. tænioptera* ?)

205. HALF-MASKED WEAVER, *S. vitellina*.

REICHENOW'S FOREST-WEAVER, *Othyphantes reichenowii*. U.K.,

1936.

206. Cape Golden Weaver, *Xanthophilus c. olivaceus*. Abroad.

207. MADAGASCAR WEAVER. Abroad, and a *hybrid* with the female Half-masked Weaver.

208. Baya Weaver, *Ploceus philippinus*. Abroad.

209. (Bengal Baya, *P. bengalensis*. Abroad ?)

210. (Manyar Weaver, *P. manyar*. Abroad ? ?) and (*hybrids* with the Baya ? ?).

211. (Javan Weaver, *Ploceella chrysæa*. Abroad ? ?)

NOTES FROM SOUTH AMERICA

By SYDNEY PORTER

(Continued from p. 213)

It is fitting that Buenos Aires, which is perhaps the world's most beautiful city, should also possess the most beautiful Zoological Gardens. The grounds cover a very large area, are finely laid out, planted with a great amount of tropical and sub-tropical vegetation and also possess a large area of water which is a great asset to a Zoological Gardens. In fact the water was the greatest attraction to me as it harboured a vast number of indigenous aquatic birds. The great charm of this "Zoo", at least to a foreigner like myself, was the large amount of indigenous fauna, large numbers of which were at liberty in the park. If I sat quietly, I was passed by all manner of creatures, Rheas, Screamers, Patagonian cavies, llamas, nutria, Flamingos, Egrets, Seriamas, etc., all the birds seemed quite at home in spite of the crowds, and most of them, except the Rheas, seemed to restrict themselves to a certain area. I noticed this especially with the Screamers. It was a great treat to see these fine birds flying about like Sparrows. The Screamers are a strange genus of bird confined to South America.

They are considerably larger than Turkeys and possess very stout, long legs, which look as though they were meant to support a bird twice the weight. Possessing huge wings, they have great powers of flight. Hudson the famous naturalist, who spent his early days in the Argentine, speaking about these birds, says, "The Screamer is a very heavy bird and rises from the ground laboriously, the wings, as in the case of the Swan, making a loud noise. Nevertheless it loves soaring and will rise in an immense spiral until it wholly disappears from sight in the zenith, even in the brightest weather; and considering its great bulk and dark colour, the height it attains must be very great. On sunny, windless days, especially in winter and spring, they often spend hours at a time in these sublime aerial exercises, slowly floating round and round in vast circles and singing at intervals. How so heavy and comparatively short-winged a bird can sustain itself for such long periods in the thin upper air to which it rises has not yet been explained."

The Screamers have fairly large hooked beaks but feed on grass and other plants, especially clover which they crop like a Goose. Each wing is armed with two very large spurs with which they can easily rip up a dog or cat, and I should imagine the bird would prove dangerous to humans in the breeding season. When the birds are approached they will emit a hissing sound and slowly raise each wing in a threatening attitude. I think they breed in the gardens, for I saw several birds in the downy stage, looking very much like young Cranes. I secured five of these birds to bring home but met with an awful tragedy at Rosario which I will relate farther on in this chapter.

There were many species of Ducks in the Gardens, but strange to say, in spite of the abundance of water, the majority were kept in small and overcrowded pens and aviaries. The rarest of all, the Magellan Steamer Ducks, were kept in a small overcrowded aviary containing various Geese, Ibis, and other water fowl, although the receptacle for water was only large enough for a couple of Mandarin Ducks. Yet in the gardens there seemed to be acres of water with no birds on at all. Steamer Ducks were the most aquatic of them all and need the most water and, given proper conditions, they would doubtless have bred. These large Ducks are mainly marine and live around the coast of Tierra-del-Fuego in the extreme south of the continent, also in the

Falkland Islands. There are four species all closely related, two being flightless and the other two being slightly lighter in colour and larger winged and able to fly. They are a mottled slate grey and rather call to mind an Eider. The birds derive their name from the velocity with which they can move upon the surface of the water in a sort of half-running, half-flying motion. These birds have been greatly reduced in their natural haunts owing to shooting by so-called scientists, who have collected the skins for museums in America. It is to be hoped that something will be done to save these birds, especially the Falkland Island species which come under British jurisdiction. In with the Steamer Ducks was a female of the very rare Abyssinian Blue-winged Goose. I understood that there was originally a pair but the cock died. I should imagine it would, if confined to such close quarters.

The South American Geese were, strange to say, very poorly represented, I only saw pairs of the well-known Magellan Geese, but as most of these birds were also confined to small aviaries they did not appear to be in good condition. This seemed a great pity as these birds could quite easily have been kept at liberty as were a large number of Egyptian Geese.

There was one specimen of the African Spur-winged Goose. This bird was in a large enclosure with a good many very fine Pelicans all in the most perfect condition, and also a host of other birds including a flock of Maguari Storks, a well-known South American bird, looking like a very large edition of the familiar European Stork. These birds, I understand, are very voracious, and it would be impossible to have them at liberty where young birds were reared. There were also pairs of the well-known American Jabiru, a huge Stork-like bird which brings to mind the better known Marabout. The entire plumage of these giant birds is snow-white, but the naked head and parts of the neck are black, and below this are two scarlet bands. The birds were kept in rather a small and very derelict aviary. There were also specimens of the Wood Ibis, another Stork-like bird, but which is in no way related to the Ibis. I was familiar with a very closely allied species in Rhodesia.

I noted many kinds of Ibis in the aviaries, especially noticeable was the fine Black-faced Ibis, one of the largest and finest coloured of the whole family and a bird which is common in the Argentine. There

were examples of the White-faced Ibis which is the South American representative of the well-known Glossy Ibis. I occasionally saw these birds in the marshy spots on the pampas. The flight is very peculiar, especially when they rise with slow wing-beats and long, dangling legs, and the extended neck and beak which hang down as though the bird was held by the wings. An Ibis in flight can never be mistaken for any other bird. The Whispering Ibis, which is a rare bird in the Argentine, was also represented. Hudson speaking of this bird says, "It seems quite silent unless one comes near to it and listens very intently, when he will be able to hear little sigh-like puffs as the bird flies away. It seems strange that this member of a loquacious, loud-voiced family should be reduced to speak in whispers!" There were specimens of the beautiful Scarlet Ibis but they were in pale plumage. I was informed by Dr. Orfila that during the breeding season the birds resumed their scarlet finery. This Ibis is probably one of the most brilliant birds in existence, being a uniform intense geranium red, the legs and beak included. It is impossible to retain the red in the birds in captivity in England. After the first moult they fade to a dirty pink. It was a great disappointment not being able to get hold of any of these birds in South America.

Of Waders, there were some American Oyster-catchers and also several Black Oyster-catchers, a rare bird found in the southern extremity of South America. It is larger than the common kind and of a more or less uniform blackish brown.

Of Cranes, there were several varieties including Stanley, Crowned, and Sarus, and unfortunately these were confined to very small aviaries.

In numerous aviaries was a large collection of the smaller Argentine birds such as the various Troupials in which the Argentine is particularly rich, the most noticeable being the lovely Scarlet-headed Marsh Birds, intense black in colour, with the head, neck, and upper breast, also the thighs, brilliant scarlet. This is one of the most beautiful of the Argentine birds and I saw several of them in the bird shop in the Sarmiento, but as I already had quite a few birds I resisted temptation. There were also various Cow-birds, Mocking Birds, etc. The Mocking Bird from the Argentine is much larger and finer than the one from

North America and is a wonderful songster. I saw quite a few of these birds in the trees in the streets of Montevideo. I also saw some of them being hawked around in the streets of Buenos Aires in small aviaries on wheels. It was a pathetic sight to see these structures filled with terrified birds being trundled along in the midst of all the rushing traffic, with no shade from the blazing sun, crouching in the corners too frightened to move. The victims were mainly Chingolo Song Sparrows, Mocking Birds, Cow-birds, and Red-bellied Thrushes, the latter being a favourite cage bird in South America and one sees dozens of them in the bird shops in Buenos Aires, the price varies according to the vocal accomplishments of the bird.

In a small aviary in the Gardens were three species of Tinamus, the Rufous, the Spotted, and the Martinita: why they weren't in a larger aviary where they could breed is beyond me.

The Tinamus are a group of peculiar Partridge-like birds with no affinities to the Partridges though they are called Partridges in South America, in fact scientists say they are related to the *Ratites* or Ostrich-like birds. They are confined to the pampas regions of South America, and are reported to be fast disappearing, but judging by the fact that "Martinita" figured almost every day on the ship's menu the birds cannot be as scarce as supposed.

These birds form a very peculiar group which differs from all other birds by their habits and general characteristics which are too lengthy to describe here. Sufficient to say that they lay the most remarkable eggs of any bird known, and these an ordinary person seeing for the first time would refuse to believe were eggs at all. Some are purple, others brilliant green, and some deep leaden black, all are most highly glazed and resemble china.

The smaller species of Tinamus are very attractive as aviary birds and I would have liked to have brought some back with me but I had to draw the line somewhere. I had had enough of bringing so many birds back that I had not a minute's spare time on board the ship, and having to overstock my aviaries when I got home.

A bird seen at liberty in the Gardens was the well-known Spur-winged Plover, one of the most familiar birds of the Argentine, where it is known as the "Teru-Teru" from its call; a great many of these

Birds are kept in gardens for besides feeding on insect pests they act as watch "dogs", giving the alarm on the advent of any strange person, dog, or cat. I saw quite a few of these charming birds in the gardens of various houses I visited. They were usually quite tame, but never allowed themselves to be touched. This is one of the finest of the Plover family and makes a delightful liberty bird in a garden. I heard many tales concerning it and its remarkable intelligence and it is undoubtedly a bird of great character. Years ago I had a couple but they were killed by a pair of Occipital Blue Pies.

I noticed in the Gardens quite a few of those delightful birds the Brazilian Stilts, one of the most beautiful and graceful of the waders. Their grace is comparable with that of the smaller Egrets. I did not bring many birds back with me as I had little room in my aviaries, but besides the birds already mentioned I did purchase a pair of these birds from the shop in the Sarmiento. "Brazilian" is rather a misnomer as the birds are found throughout the whole of South America. They are the most delightful creatures but very sensitive to cold and they cannot stand the cold, wet ground outdoors in England. I lost my pair through letting them run about in a damp spot near my duck pond. The damp, cold clay affected their feet even though it was summer time and they died. The central aviary in the Small Bird House at the London Zoo is an ideal place for these birds.

I tried also to get hold of some of those strange birds, the Seed Snipes, though quite why they are called "Snipe" I do not know. However I was unable to get any as I was not in the Argentine when they were due to arrive on migration from Patagonia.

There were numerous Rails, the most attractive of these I thought was a tiny red bird, only about the size of a Sparrow, and which I believe is known scientifically as *Laterallus melanophius*.

There were a great many Egrets, both the large, *Ardea egretta*, and the small *A. candidissima*, or Snowy Egret. With the exception of some of the latter birds in an aviary, all the Egrets were at liberty and full-winged. These birds were to be seen in small flocks and very lovely they looked in the full finery of their nuptial plumage, sporting themselves in the dark foliaged trees overhanging the water. The Great White Egrets were particularly attractive and it was a great joy to see

these stately white birds with their gleaming, ethereal, white plumage and long trains of delicate plumes trailing behind them, slowly wading about in the shallow waters of the lakes. No living animal possesses such grace as these birds. Seen in a European Zoo minus their long aigrettes and with their plumage soiled and stained from the sooty atmosphere, they bear no resemblance to these birds in a state of freedom.

There was one fairly large aviary planted with oleanda trees in which were a good many Snowy Egrets besides other small wading birds; Dr. Orfila, the director of ornithology, told me that the Egrets bred regularly in this aviary and reared their young solely on raw meat. I noticed, however, that the birds were continually fighting, though whether they ever seriously injured each other I do not know. Egrets are certainly very quarrelsome birds, even though they are gregarious in their wild state, but even at the nesting colonies there is a great deal of squabbling. The stock-in-trade of the bird shop in the Sarmiento in Buenos Aires appeared to be Snowy Egrets, these, compared to the wild birds were almost unrecognizable, being a very miserable state and very dirty; there was only one fully plumaged male amongst them and this I purchased with three others. I never saw birds bicker and squabble as they did on board the ship coming home. I had them in a large crate and, incredible as it may seem, one pair tried to nest. Since I have had them in a large pond aviary at home they have made no further attempt to reproduce.

Many years ago when seeing my first wild Egret in the full glory of its filmy nuptial plumage, with its dazzling whiteness and perfect shape, I thought it the most beautiful bird in the world and after many years and seeing many of the world's most beautiful birds I still think the same. These lovely birds were the chief victims of the plume hunter, and years ago in spite of the birds' having a very wide range, it seemed as though they would be brought to extinction. Even now, after years of rigid protection in nearly every country where they are found, there is but the merest semblance of their former numbers. Unfortunately at the present time in spite of the prohibition of the importation of plumage into this country, large consignments of Egret feathers are smuggled in and the "Osprey", as these feathers

are called, are to-day as common in the West End of London Millinery shops as before the prohibition. In fact "Ospreys" are now used for dress trimmings and one sees in the windows of some of the exclusive dress-making establishments evening dresses with the whole corsage made of Egret feathers. Quite a lot of these feathers are smuggled in the false bottoms of egg crates from China.

The filamentous plumes grow on the head, breast, and back of the bird and when it is displaying or fighting the bird seems enveloped in a filmy haze of these plumes. The Great White Egret only possesses the elongated plumes on the back. These are not erectile as in the smaller bird but the feathers form a graceful train which covers the back and projects some length beyond the tail. There were other species of Herons in the Gardens but, with the exception of several magnificent Cocoi Herons, they were not at liberty like the Egrets. The Cocoi Heron which is found throughout the whole of South America is one of the finest Herons in existence and old adult birds seem to be a mass of beautiful elongated pale grey plumes. The birds both in shape and movements are always the acme of stately dignity.

There were specimens of the beautiful Whistling Heron (*Ardei sibilatrix*) a local bird, clad in raiment of the softest pastel greys, primrose yellow, chestnut, black and white. I noticed also a specimen of the Pileated Heron (*Philtherodias pileatus*), another of the lovely South American Herons, its beauty being enhanced by a large patch of brilliant verdigris-blue skin on the face, which contrasted vividly with the snow-white plumage and black cap. There were many other local species, such as *Butoridus striata*, *B. cyanurus*, *A. involucris*, *N. obscurus*, *Ixobrychus involucris*, *Syrigma sibilatrix*, and a magnificent pair of Tiger Bitterns (*Tigrisoma marmortum*). All these birds looked in perfect condition, which I suppose was mainly due to the fine climate of Buenos Aires, for all the birds were fed solely on raw meat and some were confined in not too large aviaries.

There was a large flock of Roseate Spoonbills (*Ajaja rosea*), perhaps the most beautiful of all the waders. These birds were at complete liberty and were not pinioned; they lived around one of the lakes where they could be seen wading up to the thighs and "spooning" the water with a systematic left and right swinging movement as they

stalked along. These birds are a lovely rich raspberry pink, looking almost as though they had been dyed, the lesser wing coverts, tail coverts, and a tuft at the base of the neck are brilliant carmine, the feathers being hair-like and resemble spun glass, by a strange contrast the tail is orange buff, the feathers having red shafts. The head of this bird is bare of feathers and the skin wrinkled : this rather detracts from its beauty and give the head a rather vulturine look. I was told that although the birds had been in the gardens for many years, they had never attempted to nest ; which in a way was not to be wondered at, as there was no suitable nesting site in the way of a natural reed bed. I thought I was fortunate in being able to secure a pair of these beautiful birds but I lost the male in the awful holocaust at Rosario, but more of that anon. These Spoonbills lose their red in captivity and never regain it even though fed on live food ; after the moult the birds are a dirty pale pink, and they never seem to regain the spun-glass-like feathers.

There were a good many Flamingos in the Gardens. These, too, were at liberty, but I suppose they must have been pinioned. They were in perfect condition and looked very lovely, either wading in the water, almost submerged, or standing beneath the great sub-tropical trees. These birds, like the Spoonbills, retained their red plumage. I only noticed the one species, *P. chilensis*, though there are two species in South America, the other being *P. andenus*, which is the most beautiful of all the Flamingos.

I noticed a few specimens of that strange, Goose-like Swan, the Coscoroba Swan. I saw but few of these birds in the Argentine, and should judge that they are not common. The legs, feet, and beak of these birds look as though they had been painted with a very crude kind of brilliant pink paint. There were only five specimens of the Black-necked Swan. I think this species has greatly decreased ; once it was found in countless thousands. I very much regretted to see at Rio Grande do Sul in Brazil that there was quite a large industry in the skins of this species and at a local industries exhibition was shown a great number of articles made from the skins of these birds, from which the feathers had been removed, leaving the down. There were powder puffs, women's jackets, bedspreads, trimmings for dresses, etc. I was

very surprised indeed at this, because of the strict bird protection now prevailing in Brazil, but no doubt this bird is exempt from protection as it is a commercial proposition. It is very difficult to bring about the protection of any bird if there are commercial interests at stake. It is a pity that some international bird protection society cannot do something about this, for I am sure that a few more years will see the extinction of this fine bird. I was told that the great Lac do Patos, once the home of millions of waterfowl, used to be the home of thousands of these Swans, but now few, if any, were ever seen. Hudson states that in his day (the mid-nineteenth century) these birds were very common in the Argentine.

(To be continued)

THE BIRDS OF CANADA

By JAMES CASSIDY

Probably that Encyclopædia which under "Canada" states "the Humming-bird is not uncommon in Canada and the Rattle-Snake" is about as well-informed on bird distribution as a great number of the reading public; very few, comparatively speaking, are aware that some twenty quarto pages will scarcely suffice to list the orders, families, genera, and species of birds in East and West Canada—as many volumes might be filled in describing them.

In this short paper it is necessary to confine attention to three or four birds of interest, the hope being that such an account, brief and bare as it must necessarily be, will induce a few readers to bestow at least a few hours' study on the Birds of Canada. One of the best and most useful books to consult before visiting the Dominion for research is that published by the Musson Book Co., Ltd., of Toronto, this year, which is worth its weight in gold to those ardently seeking reliable information on the subject, unloaded with extraneous matter. The scope of the book is such that it deals with all kinds of birds known to occur in Canada and its commonsense systematic arrangement avoids the antiquated misleading statements made by some authors of the elder school.

THE LOON

The Loon Family, *Gaviæ*, includes the Common Loon, the Yellow-billed Loon, the Arctic Loon, and the Red-throated Loon.

The Common Loon is a *great plunger*. Probably few people who know well the waterways and lakes of Canada have missed the loud laugh of the Loon, or the strange wild notes that it gives forth at times. Up, up, up goes the initial note, then a fall, sudden and unexpected.

The Loon is a great weather-prophet. Sometimes, perhaps at night, before the coming of a storm the Loons call to each other and seem to utter warnings, maybe comments, on the approaching disturbances. Here is a precise description of the bird, given by that Prince of Ornithologists, P. A. Taverner, to whose book we have already directed attention, as published by Messrs. Musson, of Toronto. He writes : " The Loons are large divers, with straight, sharply-pointed bills and with the feet fully webbed. In the adult state they are coloured in strikingly contrasting patterns, mostly black and white. They are larger than Ducks and with shorter necks than Geese ; tails more evident than in the Grebes (near relatives of the Loons) ; their size, length of neck and bill, the trailing feet behind the tail, are reliable field marks. They nest on low shores in the immediate vicinity of water where they can dive almost directly from the nest."

It is one thing to dive, but quite another to rise from the water. The Grebes can do both easily, but although the Loon is a better diver than the Grebe it certainly rises far less easily from the water. A good breeze helps the Loon over the surface of the water and prevents the long splashing start which otherwise they seem to require before becoming wing-borne.

The food of the Loon consists of small fish, but as only few Loons are found in any one locality they cannot be blamed for economic consequences.

The Loons do not like to have neighbours too close to them. Their method of driving away such is curious. To free their immediate neighbourhood from Ducks, Coots, and similar water birds they attack from under water, harassing the unwelcome neighbours until they quit to escape the trouble. As though to make up for this

propensity the Loons seldom resort to waters that are attractive to other birds. This generally ensures them the solitude they prefer.

It is interesting to notice the smallness of the gullet of the Loon in proportion to the size of the bird. This natural distinction ensures that only small fish are taken. The few Loons on small lakes and the small number of fish in such lakes together with the large number of fish in large lakes makes the fishing done by the Loon quite unimportant economically, thus removing any justification for the destruction of Loons.

Leaving any further consideration of the Loon family we now consider, briefly, the largest of Canadian birds. This bird is found in the *Sub-Order Pelicani*; *Family Pelicanoidea*. The two species we have in mind are the White Pelican and the Brown Pelican.

The White Pelican is a huge bird, about 5 ft. 4 in. long. Its body is pure white; its wings black; its bill is flattened and frequently measures over 1 foot. Its most distinguishing feature is a great yellow throat-pouch, capable of holding several quarts. Mr. Taverner's remarkable description deserves quotation word by word. He writes: "The ponderously serious flight of these great white birds, with their slow beat, beat, beat and then a long dignified sail, is a common sight near the larger prairie waters as they wing back and forth between the lakes and feeding grounds. They fly in long evenly-spaced lines, abreast, in tandem, or in V's. Pelicans are communists, individualism is unknown among them. The way one faces they all face; as one poses they all pose. Standing on a bare sand-bar, they line up in military formation and digest their dinners together. Flying they assume their appointed positions, and taking the beat from their leader keep time with him, flapping and sailing together. No more beautiful sight may be seen on the prairies than a long line of the great white birds, black pinioned, with golden pouches tucked under their chins, all sparkling in the sunlight in brilliant contrast with the deep blue water or azure sky."

It is absorbingly interesting to watch the Pelicans feeding as, with head held high, the long bill turned down against the breast, they paddle about in the water below.

Suddenly the bill is opened and plunged down and forward, the

food has been sighted, probably some small and sluggish fish of the weedy shallows. The victim is scooped up and either swallowed at once or stowed away in the roomy pouch to be fed later to the fledglings at home. Pelicans work hard for their living, frequently travelling many miles in their food-hunts. It may certainly be claimed that they offer one of the finest and most attractive features of the prairies. Their nests are made in large communities, generally on islands in the larger lakes. Thus they ensure comparative freedom from their natural enemies. Unfortunately this immunity from attack by foxes, coyotes, etc., does not secure them from attacks by men who, when it suited them, have not hesitated to fatten their pigs on the eggs and young of the Pelican.

The home of the Brown Pelican is the United States rather than Canada. This bird is smaller than the White Pelican. It makes occasional visits to Nova Scotia and Southern British Columbia. Its habits are similar to those of the White Pelican. Its throat-pouch is dark brown in colour.

One of the most beautiful and useful of the small birds of Canada is the "Cardinal" or "Red-Bird".

For careful and commonsense description of this bird the palm should be awarded to Mr. A. P. Taverner. His clear and concise description runs thus: "The male is bright cardinal-red with a black splash about the base of the bill and throat. Both sexes have a decided crest as prominent as that of the Blue Jay. The female is warm buff in colour, almost white below and olive-buff on the back, the wings, tail, and crest approaching the rosy colour of the male. The black face and throat of the male is faintly indicated.

The "Cardinal" nests in bushes; the nest is constructed of twigs and rootlets and strips of bark. It is made snug by a lining of grasses and shredded roots.

The bird is found in the United States and Canada, but wherever it is found its permanency of residence may be assumed.

A second asset besides that of its gorgeous colouring is its brilliant whistling, delighting all who are lucky enough to hear it. It is of great value economically, as well as for its beauty and its exquisite notes, its food consisting of "locusts, cicadas, potato-bugs, rose-chafers,

plum and cherry scales, cutworms, weevils, and other destructive pests. Not content with all this helpful work it takes weed-seeds in considerable amount and some *wild* fruit". There is not a shred of evidence that this bird touches cultivated fruit. Another species is the Rose-breasted Grosbeak. This most beautiful little bird has a pleasant song resembling that of the Robin. In his spring plumage the male looks a gay little fellow, his rose-red breast, with pure white below and his smart black back, tail, head, and wings give him a dressy appearance. The female presents a somewhat dull appearance not unlike that of the Sparrow-stripings. In autumn male and female are much alike in colouring, the distinction being a slightly warmer colouring and an under-colouring of rose-red on the breast of the male. This bird nests in bushes or low standing trees, is a poor builder, putting together a loose untidy affair of fine twigs, rootlets, and weed-stalks. It haunts tangled thickets and large trees, woodland clearing along the rivers, and sometimes orchards. It is, indeed, invaluable to the potato farmer, as it eats potato-bugs and other insect pests. Investigation of its food habits has revealed that the Black-headed Grosbeak eats three times the insect food to what it eats of vegetable food, the insects including codling moth, canker-worm, and several kinds of scale. It should be carefully protected if only for its great economic value.

(We shall hope to give a second paper on some of the birds of Canada.)

THE BREEDING OF THE GANG-GANG COCKATOO

By LORD TAVISTOCK

A few years ago I received a young pair of Gang-Gangs. The hen was a nice bird but the cock was a useless creature for not only was he pinioned (which was not his fault), but he was also a confirmed biter of his mate's plumage and, in a lesser degree, of his own. I finally gave him away and last year obtained the loan of a cock from the Zoological Gardens. The new arrival was not too promising in appearance as he, too, had been much plucked and was said to be a plucker and, from long confinement in a cage, he was quite unable to fly. However, he

proved a bird of good intentions, for he left the hen's plumage alone ; in time grew a new suit himself ; and even got as far as going into the nest and pairing, though no eggs were laid that year.

After many months the cock regained the use of his wings, and when spring came round again, he and his mate began to indulge in hostile demonstrations and bad language towards human intruders, though they did not venture actually to attack. The hen had been friendly towards me while she was a spinster and would come up and display if spoken to, but now her heart was elsewhere and surly snarls were all that I received. Gang-Gangs are quaint birds in that a mated pair, though really most devoted, love to engage in mock disputes accompanied by much bad language—*real* bad language, the same that is directed against an enemy. There is also much pretence of biting although not a feather is ever damaged. Strange to say a single young cock at present in my possession uses the same abusive language when playing with a branch which at present has to do duty for a wife ! This year the cock Gang-Gang of the pair began to take an interest in the nest—a hollow tree trunk placed in the flight and filled with peat and decayed wood—in April, but it was not until 20th May that the pair were obviously taking turns in sitting.

We did not examine the nest and very little was heard of the young which, unlike young Roseates and Leadbeaters, make only a very subdued noise when hungry or when being fed.

Early in August a young hen was seen looking out and on the 7th she emerged—a lovely big bird, much like her mother save that she had a darker head and some white on the culmen and tip of the upper mandible. Her appearance annoyed X, who two days later apparently set about her, with the result that the following morning we found her very lame and with a fractured wing—injuries from which she is now slowly recovering. Her parents show great affection for her and do not neglect her because of her misfortune. About this time a second head appeared at the nest-entrance and in due course a young cock emerged who so far has escaped X's attentions. He resembles his mother in colour, showing the same greenish tint on the wing and the same breast markings, but his crest and the centre of the crown of the head as far as the beak, are red.

Both old birds feed their offspring but strange to say are less aggressive now that they are fledged and do not seem to credit us with evil intentions towards them.

The young were reared mainly on sunflower, peanuts, apple and bread-and-milk, of which latter Gang-Gangs are rather fond. They also like an occasional small piece of cooked beef fat. Hemp should never be given, nor that abomination—safflower—which figures largely in most Parrot mixtures.

THE VISIT OF THE AVICULTURAL SOCIETY TO LECKFORD

By N. WHARTON-TIGAR

When we were all invited to Leckford to see Mr. Spedan Lewis's birds we knew we were in for a treat, and we certainly were not disappointed. We had heard that for the last year or two Mr. Lewis had been re-stocking his aviaries with all that is rare and beautiful in Pheasants, Water-fowl, and Cranes.

Saturday, 23rd July, turned out to be a lovely day: we travelled down very comfortably from Waterloo to Winchester, and we were taken by special motor coach to Leckford. We drove right in, close to the cricket pavilion, where our hosts, Mr. and Mrs. Spedan Lewis, greeted us very cordially, and we then sat down to a delicious and well-served lunch.

Owing to the danger of unduly alarming the birds, it was wisely decided to split the party into several groups, so that the enclosures should never be overcrowded with visitors. This worked very well. Miss Chawner our Editor, who has been in charge of Mr. Lewis's birds for many years, headed one party, the Head Keeper another, Mr. Terry Jones, who is now at Leckford, took a third, and Mr. Lewis himself the remainder. I was one of this last group. Immediately after lunch we set forth to see the Pheasants, etc. They are admirably housed, in very large grassy enclosures each with a roomy shed, and a group of suitable flowering shrubs, conifers, etc., is planted in each, to provide cover and shelter in the future.

The Pheasants are magnificent, many of the rarest and most

beautiful varieties are gathered together here. There are Tragopans in four varieties, the lovely Satyr or Crimson-horned, the very red Temminck's, Blyth's, and Cabots, all beautiful and tame. A cock of the last-named species especially took food not only from his owner's hand, but came round to all of us to see if we had anything for him! Then there are two lovely pairs of the very rare Palawan Peacock Pheasant from the Island of Palawan, between the Philippines and Borneo. This must be the greatest treasure; for when I asked Mr. Weaver, well known as one of the most experienced of Pheasant keepers, what he thought most wonderful among the Pheasants, he answered, "the two pairs of Palawans." There are also pairs of the Imperial Pheasant, very rare indeed: this is a lovely variety, and so is Edward's Pheasant, also rare—a near relation with a white crest and shining green wings. Besides these there are Rheinhardt's Argus, a glorious pair, Mikado, Siamese Firebacks, Monauls, Swinhoes, Bronze-tails, Copper Pheasants, Blue Crossopylon.

In the Pheasant enclosures there are various other birds such as Touracous, of which there are several exquisite varieties, Pink-crested, Donaldson's, Senegal, South African Grey, and Violaceous Plantain-eaters. Mr. Lewis thought, if he were faced with having to keep one bird only, his choice would be a Touracou! I noticed also some fine Green Glossy Starlings, Bartlett's Bleeding-heart Pigeons, and Jobi Island Doves, Australian Plumed Ground Doves, the cock displaying to the hen in the most enchanting manner. I hear from Mr. Terry Jones that the hen is now sitting, the nest is on the open ground. I hope all goes well—what a delight if young hatch out.

From the Pheasantry our party went on to the quarantine room, passing on the way pens full of young Pheasants, etc., a credit to the keeper in charge! The quarantine room is a building divided in three parts, one for preparing and storing food, etc., one for isolating in case of illness, and a third large portion is divided into various aviaries, where are housed some of the Owls for which this establishment has long been noted. Here are Bouvier's Owl from Fernando Po and Woodford's Owls from West Africa. There are also two varieties of Kingfisher (Red-billed and Pigmy) and a pair of the rare Swainson's Toucans.

The Cranes at Leckford are a great feature. All are in wonderful condition and they are housed in large grassy enclosures about the grounds. Mr. Lewis showed us his pair of Sandhill Cranes and their two fine youngsters, we also saw an exquisite and tame specimen of the Cape Crowned Crane ; afterwards on seeing the two pairs of the Manchurian Cranes I exclaimed to Dr. Hopkinson that their beauty was more subtle, but he emphatically disagreed with me, in his opinion the Crowned Crane is unsurpassed !

Besides these there is a Hooded Crane, White-necked Cranes, Native Companion Cranes, Asiatic White, the graceful Stanley, Black-necked Crowned, and Lilford's Cranes, and the lovely little Demoiselle, in fact every variety known except the following : Wattled, Whooper, Black-necked Grey, and Canadian.

We were afterwards driven down to the water-meadows, to see the third wonderful collection, namely the water-fowl. Here is a veritable paradise for these birds. A very large space has been enclosed and made vermin and fox proof, no small undertaking ! and it is divided into many wired enclosures, each with clear running water ; an island is being formed also, to house Gibbons' Monkeys, this will in the future be a great attraction. Mr. Lewis means the Gibbons' home to be constructed to resemble a ship. One can well imagine how delightful this will be, and the whole of the water-fowl enclosure can, and no doubt will be, transformed into a beautiful wild water garden—many water-loving plants will delight in the moist situation. A clear stream runs through this land, noted for its wonderful fishing ; owing to this clearness it was a sight to see the Ducks diving and swimming at the bottom of the stream.

I noticed three varieties of Swan, the Whooper, the Black-necked, and the Black. Among the fine collection of Geese were several Ashy-headed Geese, a pair and a male of the Andean Geese recently brought over by Mr. Morrison, a pair of Ruddy-headed Geese, four pairs Red-breasted Geese, a truly lovely sight, two pairs of Emperor Geese, one pair of Ross's Snow Geese, two pairs Blue Snow Geese, one pair Snow Geese, and a pair each of Orinoco Geese, Egyptian, Cereopsis, and Abyssinian Blue-winged Geese.

Among the Ducks there are pairs of Hottentot Teal, Versicolour Teal,

Red-billed Pintail, Cape Shovellers, Rajah Shelduck, Australian Shelduck, and one female Cape Teal. There are also Flamingos and Spoonbills.

After seeing all these, and being most impressed with their beauty, variety, and the efficient way they are housed and cared for, we were driven back to the Pavilion where tea was served and much enjoyed by all of us. We then took leave of our hosts and were driven back to Winchester and so home. I know I voice the sentiments of all those present in thanking Mr. and Mrs. Spedan Lewis for their kind hospitality; all were enthusiastic about the lovely collection we had seen. I should also like to add to this a vote of thanks to our energetic Secretary, Miss Knobel, for the trouble and extra correspondence that was entailed in arranging for this most enjoyable day.

ORNAMENTAL PHEASANT SOCIETY

As mentioned in my notes last month, our Society propose to issue Christmas cards for the use of members. The details of this innovation have not yet been settled and the Committee has been left to make final decisions. The main feature, however, will be the painting of an Amherst cock by a well-known artist. It has been felt for a long time that such a painting has been sorely needed. The Amherst has been crossed with its near relative, the Golden, for many years, with the result that to-day it is most difficult to obtain genuine pure Amhersts, or for that matter Golden. Many phasianists imagine they have pure birds, but in reality they are hybrids, perhaps in many cases 90 per cent pure, but that is not as it should be. Therefore, this plate will give all details and characteristics of the pure Amherst cock, and will, we feel sure, be appreciated by our members and others. Ten years ago there were, perhaps, 100 Amhersts in this country, of which possibly more than 50 per cent were pure birds. To-day there must be nearly 2,000 so-called Amhersts in Great Britain and it is safe to say that not more than 20 per cent are pure, a very sad state of affairs. Yet things are improving, four years ago there were not 5 per cent pure, since then matters have been steadily improving and in a few years time hybrid Amherst \times Golden will be almost entirely eliminated. One of our

prominent members visited a well-known store in the West End of London recently and was shown a pair of Amhersts. Now both cock and hen were out and out hybrids and yet the attendant was most indignant at being informed they were not pure. That only serves to prove that our public needs educating to the true facts.

By the issue of this card our members will have a guide, and thus be able to distinguish the pure from those that have Golden blood in their veins. The pleasing factor of this painting is the fact that our President, Monsieur Delacour, is leaving no stone unturned to make it an absolutely perfect portraiture of an Amherst cock. He will himself interview the artist and point out the vital points ; the artist will view a pure bird and will then finish his work from a specimen at the British Museum. What is the lesson to be learned from this necessity ? On only one small and seemingly unimportant matter, but so vital, let us keep all birds, whether Pheasants or other birds, pure, and do not waste time in hybridization unless there is some specific point to be gained : this let our scientific friends carry out, for the average man it is useless foolish, and futile.

JEROME LAMBERT.

ERRATA

- p. 1. *crevirostris* should be *brevirostris*.
 - p. 212. (one line from bottom) *bonariensi* = *bonariensis*.
 - p. 220. *madagascarensis* = *madagascariensis*.
 - p. 222. (bottom line) *replendens* = *resplendens*.
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APOLOGY

The Editor deeply regrets that the article on the Orange-bellied Grass Parrot, by Dr. Hamilton, was wrongly attributed to J. F. M. Floyd. Mr. Floyd was the author of the review on "Studies in the Life History of the Song Sparrow".

The article on the Short-billed Minivet was written by Monsieur J. Delacour.



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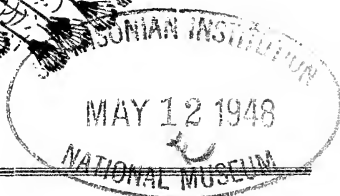
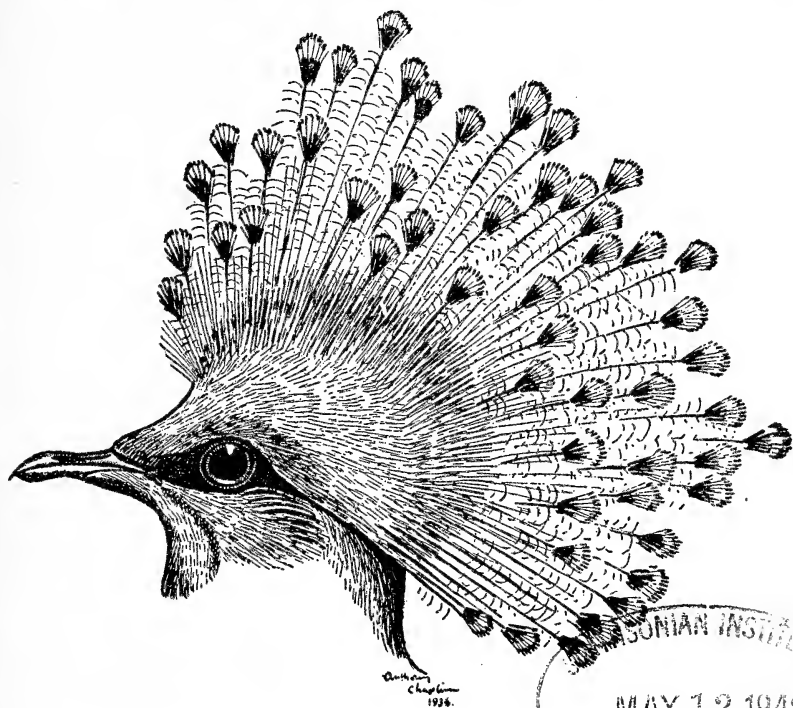
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THE AVICULTURAL MAGAZINE



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THE AVICULTURAL SOCIETY

FOUNDED 1894

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The Subscription to the Avicultural Society is £1 per annum, due on the 1st of January in each year, and is payable in advance. The entrance fee is 10/-. The *Avicultural Magazine* is sent free to members monthly. Members joining at any time during the year are entitled to the back numbers for the current year, on the payment of entrance fee and subscription.

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THE AVICULTURAL MAGAZINE

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OCTOBER, 1938.

THE INTERNATIONAL COMMITTEE FOR BIRD PRESERVATION

A PERSONAL APPEAL BY DAVID SETH-SMITH

I would like to make a personal appeal to every member of the Avicultural Society, of which I am one of the oldest members, to give their support to the British Section of the International Committee for Bird Preservation. Aviculturists are people who are very fond of birds, and wish above all things to preserve the birds of the world, and especially those species that are in special need of protection, but they have always been rather suspicious of certain societies which obtain much of their support from a section of the public who are rather sentimentalists than naturalists and who have the mistaken idea that to keep any bird in captivity is cruel. Such people are the very life blood of certain organizations which have grown rich as a result. It is high time that a wider view of bird preservation should be taken and bird preservation and aviculture should march hand in hand.

The International Committee consists of genuine bird-lovers who are not opposed to sport or aviculture. Monsieur Delacour, who we all know as one of the leading ornithologists and aviculturists of the world, is the President of the whole Committee, while on the British Section of it we have Mr. Alfred Ezra, and many aviculturists are either Patrons or Associates.

The British Section has already done valuable work in drafting and getting passed into law a bill prohibiting the importation of live European Quail into Great Britain during the breeding season. It is common knowledge that this species was becoming far scarcer than formerly, owing to the wholesale netting that was going on, in order to supply the demands of restaurants and hotels. Another of their objects is to secure the adequate preservation of Waterfowl, both in the British Isles and throughout Europe, before it is too late.

Still another matter which the Committee have in hand, is the better treatment of live birds during transit to Europe from Africa and the East. We all know the overcrowded and insanitary condition in which foreign birds are sometimes received by European dealers, and the International Committee would like to see such importations inspected before dispatch to insure that the cages are suitable and the numbers in each cage limited to avoid overcrowding, and that proper attention is given on the voyage. This is a matter that has been exercising the minds of many people for some time past, and unless tackled by a reasonable body like the International Committee may lead to stringent laws which will affect aviculture generally.

These are a few of the matters that are being taken up by the International Committee, and I feel strongly that in the interests of aviculture, if for no other reason, it is the duty of the Avicultural Society to do all it can to support the British Section of this organization. With this number of the Magazine is enclosed a leaflet, setting forth the aims and objects of the International Committee, and as Treasurer of the British Section, I feel that I may apply with confidence to my many friends of the Avicultural Society each and all to become either Patrons or Associates.

ROUND ABOUT DUTCH NEW GUINEA

By S. DILLON RIPLAY

To all people interested in birds the name New Guinea spells romance and high adventure. Now in these days of rapid transit, when the last frontiers to the unknown are crumbling New Guinea has been added to the list of accessible places to be visited. Accessible indeed even to the most casual traveller. To any bird-lover, then, who has happened, in the course of his wanderings, to arrive either in Singapore or anywhere within the Dutch East Indies, the writer would hasten to advise a trip to Dutch New Guinea. To be sure, it is a fact that even in Batavia, Sourabaya, or Singapore, nine out of ten people who live there will be just as convinced that New Guinea is horribly dangerous and inhabited solely by fearsome cannibals as any inhabitant of England or America. I cannot entirely refute that opinion, having lived with cannibals in Dutch New Guinea for a period of months, but that it is a dangerous place to visit, I am strongly inclined to doubt.

Nowadays the K.P.M. Line, the largest of the Dutch Lines, runs two monthly mail and cargo steamers to Dutch New Guinea from Makassar, the principal port of the island of Celebes, itself a two-day steamer journey from Sourabaya in Java, or four days from Singapore. The boats are comfortable, with good service and both Sourabaya and Makassar have excellent hotels.

While in Java I went to the bird markets, in Batavia and Sourabaya, but was disappointed as the variety of birds was small. Bulbuls and Barbets were the common varieties of insectivora. Of the former the Yellow-vented and Ruby-throated were the commonest, both Java species; and of the latter the Blue-crowned and the Dull. Java Sparrows were in large numbers and of course the little Zebra Dove, or barred Ground Dove, much admired by the natives, as well as the larger Double-Collared or Island Turtle Dove. A few shops had good talking Mynahs, but their owners knew their value. Paroquets were fairly common, all of the "Alexandri" form, but in one shop I was very tempted by a tiny cage full of the Vernal Hanging Loricquets. No Pheasants or Jungle Fowl were to be seen, but in Sourabaya I saw a

sad looking specimen of Specific Peafowl, in much too small a cage. But the casual visitor to the Indies would do much better to call in at the homes of the European dealers of whom there are three in this area : the proprietor of the Singapore Zoo, who has some lovely birds, including Birds of Paradise ; the owner of the Zoo in Belawan Deli, Sumatra (a port which most liners stop at nowadays for a few hours) ; or a German dealer in Makassar. In all of these places one can feast one's eyes on rarities that might be months getting into the bird market shops. Fairy Bluebirds, Pittas, Doves, rare Hawks, Pheasants of many species, Sunbirds, and even Birds of Paradise can be secured. As to the latter : a permit must now be obtained before they can be exported from the Dutch East Indies (not from Singapore) so one must not expect to travel to Dutch New Guinea for Paradise Birds unless one has previously applied to the Department of Economic Affairs in Batavia. Other birds, too, such as Crowned Doves and Kingfishers are on the forbidden list. A trip to Dutch New Guinea is still an exciting thing, however, whether one has such a permit or not, and also one should not be deterred by the thought of such a permit alone. It's always worth trying for even if one does not get it.

And now on to Dutch New Guinea. Arriving in Makassar, there are usually a few days to wait for the New Guinea mail boat. The most interesting place to stay here is Malino, a hill station about four hours' drive from Makassar where electric light, good food, and a comfortable dak bungalow, plus the cool breeze and superb scenery, make an ideal refuge from the heat of the lowlands. There are two mail boats going on different routes, one along the north shore of Dutch New Guinea, the other along the south shore. The more attractive route, both from the point of scenery and of climate, is the northern one, and an amusing feature of it is that it skirts so close to the Equator that it is possible to return from one's trip of a month a veteran of ten or twelve crossings. I say a month's trip, because for those with limited time at their disposal and no desire to bring along a certain amount of equipment, such as camp beds, *et cetera*, it is far more advisable and pleasant to stay on board the mail boat all the time with a comfortable cabin and regular meals at one's disposal. From this vantage point one can sally out to see the sights at the different ports without having to live ashore. The

mail boat leaves early in the month from Makassar and returns early the following month.

Before calling at New Guinea, it stops at Ambon, a small island south of Ceram, where the head offices of the administration of this area are situated. In Ambon there is a dealer who is, however, mostly interested in Parrots. I bought a lovely pair of the Giant Rajah Cockatoos, *Probosciger aterrimus*, from him as I had only secured one in New Guinea and it had died. These rare birds only seem to do well on a local form of almond called "Kanari", although some have tried them with grated coco-nut meat. This dealer also had a beautiful Ceram Cockatoo, salmon crested and salmon tinted, surely, next to Leadbeaters, the most beautiful of that tribe; and a comical young Wreathed Hornbill of the kind which is so common in New Guinea. Another attraction was a beautiful breeding pair of Ceram Eclectus.

From Ambon one goes north to Halmahera, skirting around the coast of this curiously-shaped island and stopping at many places of interest such as Batchian and Ternate—both ruled by local Sultans, the latter place surrounded by a breath-taking series of gorgeous island volcanoes. Everywhere here one sees the Halmahera Lory, *Domicella garrula*, perched outside the doors of native houses, shining green wings contrasting with vivid red bodies. Batchian is the home of the rare Wallace Standard Wing Bird of Paradise. Wallace's description of the sight of these birds is exciting to read even to-day, and no traveller to the far East Indies should be without a copy of the classic *Malay Archipelago* which describes so well the hardships and thrills encountered by the great naturalist in the early eighteen-sixties. But this bird is too rare ever to be met with in a few hours' stay. The advantage of the mail boat, however, is that it calls at most of the same ports on the return journey. Now that I have left New Guinea and Halmahera, I have regretted that I did not bestir myself sufficiently to meet the powers that be in Batchian, tell them when I was passing through again, and beg and implore them to send out some bird hunters for me. People in the East Indies and New Guinea are kind and generous to passing travellers. I suppose it is in the frontier tradition to be so. I always found their understanding and helpfulness to be unfailing, though sometimes I wondered why it should be so; why they should

be patient with a hurry-scurry, wild-eyed person like myself who, whenever birds were mentioned, was off in a torrent of conversation and usually was asking all sorts of favours before he was done.

From Halmahera, the course lies to New Guinea via the famous island of Waigeo, ten miles or so north-west of the mainland. Waigeo is the home of the Red Bird of Paradise. It is one of the really beautiful islands of the world. At Saonek, the port of the island, natives paddled out to the mail boat with samples of the local arts and crafts—weaving with palm, orchid and pandannas leaves, wood carving, and also with a few birds. If they know that there is someone on the boat interested in birds they will bring many more out when it stops on its return trip. I saw Rajah Cockatoos, Crowned Pigeons, small Lories, principally the Black-capped, and a pair of the beautiful White Torres Strait Pigeon, *Ducula spilorhoa*. I bought a tame young female Eclectus here.

Sorong, the next stop, is a tiny island about fifteen minutes, by native canoe, from the extreme western mainland of Dutch New Guinea. Here there are many natives acquainted with bird trapping and a word to the native magistrate of the island should net many birds on the return trip. Most of the birds which I have seen offered for sale were from near Sorong. Lesser, Twelve Wired, King, and sometimes Magnificent Birds of Paradise are all moderately easy to obtain. Parrots are numerous and of many kinds, from Cockatoos down to even the tiny *Micrositta* Parrotlets, including the unusual Black Lories and the pale-tinted, big-eyed Geoffroyus Parrots. Also Pigeons are common. I bought a lovely Megaloprepia Fruit Pigeon, grey head, neck, and throat, green back with yellow spotted wings and cherry coloured breast and belly; a delight to the eye and exceedingly tame. I also bought a young Podargus, the Giant Frogmouth of Papua, which sat solemnly on a branch in the hand of its native captor, blinking its enormous eyes, more like an owl at first sight than anything else. Here, too, I was offered several Megapodes for sale and was tempted to take them, except that they seemed too wild ever to learn to eat properly. At another time, living in the mountains of New Guinea, I tried to tame some full-grown wild trapped birds without success. Also some of the big Pheasant-like Ground Pigeons, *Otidiphaps nobilis*,

but all without success. Even Megapode and Brush Turkey chicks seemed quite senseless and wild in cages, and would break their necks if allowed in too big a cage where they could move freely.

From Sorong the boat moves on to Manokwari, the largest town in northern Dutch New Guinea. There is a rest house here with furniture in it but no servants. This is the one place which would be most comfortable to stop over in, either for eight days until the boat comes back from its stops to the East, or a little over a month until the next boat stops. A knowledge of the Malay language is essential, however, if one were to hire a servant from the town for cooking. Two factors commonly met with in the East present a minimum of difficulty in Dutch New Guinea: petty thievery and malaria. The former is almost unknown and the latter, provided one observes the ordinary precautions, is not by any means to be worried about. In Manokwari there are a few good roads and paths, of course no automobiles, and in fifteen minutes' walking to the west of the town I was able to feel myself really in the jungle. Hornbills flew overhead in the giant trees, two by two, grunting mournfully, and the gong-like calls of the Lesser Bird of Paradise were frequent, though the bird itself was not too easily seen. In a giant fig tree I found a small flock of the little-known Desmarest's Parrot, *Psittaculirostris*, while all about sounded the strange calliope notes of the pied Piping Crow, *Cracticus cassicus*. A pair of big Fruit Pigeons attracted my attention, the male performing his swooping flight—a dive with set wings and then a lift, just like English Wood Pigeons. Farther on there is a big patch of mangroves and here may be seen Cuckoo Buzzards, blue and white Kingfishers, brilliant against the mangroves, and many flocks of Sunbirds and Flower Peckers along the edge of the road. In Manokwari I was offered mostly Lories, Lorikeets, and Cockatoos for sale. The Dutch government believes that New Guinea is a psittacosis-free area and have empowered the local customs authorities to issue a clearance paper for Parrots bought there. But it is doubtful how much weight such a paper would carry unless the birds had been strictly quarantined. I did, however, buy a pair of pretty green Fruit Pigeons, *Ptilinopus iozonus*, and a male Spider Hunter, *Xanthotis*, a delicate brownish long-billed bird, which would have done better if I had remembered to

bring ant's eggs along from Java. There are quite good Chinese shops in Manokwari where one may buy a large variety of canned food (and even iced beer, a Papuan rarity). Also there is a fairly recently-established supply of good green vegetables grown by a colony of Dutch-Javanese colonist farmers imported a few years ago by the government. When I left Manokwari an electric light plant had just been installed so one can see that the amenities, so called, are just around the corner for this outpost of civilization.

Manokwari lies on the north-west shore of Geelvink Bay, a large area of water dotted with islands, which nearly cuts the mainland of New Guinea in two at this point. The mail boat stops at three or four lesser ports in the bay, one of which is almost sure to be Bosnik on the large island of Biak. This island, very little known ornithologically, is the home of a large sub-species of the Black-capped Lory, *Domicella lory cyanauchen*, which strangely enough is the only member of the family showing a marked precocity for talking. I purchased a splendid male, "Jacob," whose conversational powers were a constant source of wonder. He would rattle along for minutes on end in a mixture of the Biak language and Malay. The tone of his voice was low and so quaintly pitched that one could never fail to drop all work and stop to listen to his endearing chatter. He was very neat and tidy, constantly bathing and preening his vivid blue and red feathers in the half coco-nut shell tied to his perch. In this he delighted to bathe, becoming so drenched that he looked more like a bunch of badly chewed rags than a trim little Lory. But a few shakes, twists, and nervous preenings and he was himself again, even more glossy than before. But, alas, the chain to his perch was none of the best. One day in Sorong a dog scared him and he broke off, never to return. Such are the trials and griefs of a bird-lover.

Biak is also famous for the carved wooden images of the natives' ancestors' spirits. These are made by the islanders, who differ a good deal in type from the natives of the mainland. These images, called "Korwars", are among the finest examples of primitive art to be found in New Guinea.

The port of Hollandia on the mainland is the farthest east that the mail boat goes, not so very many miles from the border of the Australian-

mandated territory of New Guinea. Strangely enough Dutch and Australian Papua have virtually no contact with each other: no boats go between the two places and the border line, drawn down the centre of New Guinea, might as well divide it into two separate islands. Hollandia is poorer in birds than the other ports and the short stop of the boat allows only a brief walk on the shore. The situation of the village is very beautiful though. The mountains, little bays, and native villages raised out over the water, for all the world like a picture of early Swiss lake dwellers, make a beautiful scene. The natives here are good carvers and often have interesting things for sale. Dutch New Guinea is refreshing in this way. It has no tourist trade and so the few articles for sale are most likely to have been made only for Papuan use and sold as an afterthought.

Serui on the island of Japen in Geelvink Bay is in another picturesque harbour with mountains on three sides and on the fourth, across the shallow waters of the bay, the foothills of the great Snow Mountain range, the backbone of New Guinea, can sometimes be seen. Japen contains many interesting varieties of birds. I have seen Victoria Crowned Pigeons for sale, and there are different sub-species of both and King and the Lesser Birds of Paradise, as well as of many smaller birds. Insectivora are, naturally, both hard to obtain and hard to keep on the long journey home. Some of the species of Fantails and Flycatchers tame readily enough, however, and I kept a pair of the common "Willy Wagtail", *Rhipidura leucophrys*, for some time. A delicate little bird which would have done well enough, I am convinced, if I had had more experience, was the Ruby-chested Honeysucker, *Myzomela eques*, a dun-coloured bird with a flaming scarlet patch on the lower throat and breast. It may well be that the honey from which I made nectar for it was artificially made and possibly contained some harmful element. New Guinea has a family of Kingfishers lovely beyond all others—the stunning cerulean and white Racquet-tailed, *Tanysiptera*. They are birds of the lowland forest and some natives are fairly good at catching them with a sort of bird lime of native manufacture called "gutta" made from the sap of a tree. But this is a bird too difficult save for the aviculturist of genius. They fade and droop in captivity and seem to absorb no nourishment even when forcibly fed.

And so the small boat completes its round and turns back again towards civilization. At Pulu Dua, a two hours' stop for loading copra, a Besarese came out to the boat in a "prahu" and offered me his treasure, trapped in the mangroves of these tiny coral islands. It seemed well worth his price of half a shilling so I bought it. A delicate little Yellow Bittern, *Ixobrychus*, faintly striped yellow on brown: a veritable miniature Bittern. I let it out of its palm leaf cage, into a bigger one, but it sulked and refused all the delicate morsels I could offer it. Passing Sorong for the last time with the tiny island of Ram just off to leeward, I lifted the tiny bundle of feathers out on deck and perched it on the rail. Without a backward glance it stretched out its neck, tucked its gangling feet behind it, and went fluttering and swooping off to a new home in the mangroves.

And so the mainland of New Guinea dips behind the horizon and a memorable trip is over. Evening comes down over the calm water, the ship heads towards Makassar, and the tropic moon comes up as I go below to see that the night air is not too chill for my cargo of birds.

THE BREEDING OF THE BLACK-CRESTED FINCH

Lophospingus pusillus (Burmeister)

By PATRICIA R. CHOLMELEY

Under the trade name of "Pigmy Cardinal", I believe the first importation of these neat, soberly attired little birds occurred sometime in 1937. I acquired a pair of them, in March of this year, and turned them out into a large, planted aviary, containing a mixed collection of little birds. It was not until towards the end of July that they began to carry nesting material. The site chosen was in the angle formed by the supports to one of the main cross-bars of the aviary, and very exposed. The nest was cup-shaped, fairly tidy, and made almost entirely of moss, and lined with feathers. The eggs, two in number, were deep cream with reddish spots; incubation took fourteen days. Both eggs hatched, the young covered with grey down feathered very quickly;

the old birds fed on regurgitated seeds, insects caught in the aviary, fresh ant eggs, gentles, and a few mealworms. On the tenth day, one of the young fell out of the nest and was picked up dead. The other bird continued to do well and at a fortnight left the nest, but as it was too young to fly very strongly, and insisted on disappearing into the thickest undergrowth, it was thought best to place it in a small cage, which was hung up on the site of the old nest. The young bird was fed assiduously by both parents through the bars, and also both parents used a small trap-door in the top of the cage, which was left open when someone was in the aviary. From time to time the young bird was let out of the cage for exercise, and would have been left out entirely but for the wet weather. By this time it was almost as large as the parents, sported a crest, and had the same ashen grey appearance of the hen.

Sad to relate I had to be away for a few days, and on coming back found it looking far from well. It was let out of the cage and fed with tremendous energy by the parents, but the next morning I found it dead. I can only imagine that the parents could not feed it properly through the bars, and the trap-door not being in use, it died from starvation.

So far, 29th August, the old birds have not made any attempt to nest again.

SUCCESSFUL BREEDING OF THE MOUNTAIN QUAIL

Oreortyx picta

By ALFRED EZRA

This very attractive Quail comes from the Greenhorn Mountains of California. It is the handsomest of this group, both in its colour and its decorative crest. Male and female are alike, except that the female usually has a shorter crest and slightly duller colours. The eggs are reddish-buff, without markings. I have had a pair of these birds for some time, in one of my large aviaries in which there are a good many

other birds of different kinds. They built a nest in some pampas grass at the foot of a holly bush which is covered with ivy—just a hollow in the ground, lined with leaves and feathers.—The first egg was laid on 4th May. After three eggs had been laid the nest appeared to be deserted, but on the 28th May four eggs were noticed and the birds started to take an interest in the nest. On examining the nest on 10th June, eight eggs were found and these were quite warm. A few days later the hen was seen incubating, and several times afterwards both the hen and the cock were seen on the nest. Four young were hatched by the 30th June, one egg contained a dead chick and the other three eggs were infertile. The young and the adults were caught up and placed in a small enclosure measuring 5 feet by 4 feet by 4 feet high at front and 3 feet at back, with a wooden floor. The young were at first fed on mealworms, grasshoppers, insectivorous food, maw seed and chick food. Three of the young died on the 5th, 11th, and 14th July respectively. After this we decided to discontinue giving the remaining young one mealworms, grasshoppers and the insectivorous food and fed him on maw seed and chick food only. This had the desired effect and this young one has been fully reared and is quite a healthy and strong bird. It shows that a good many birds do not require a lot of insectivorous food and certainly not many mealworms. The chick resembles the chick of a Californian Quail. As this bird is rare in this country I am pleased to have bred it. I believe it has not been bred before.

BREEDING OF MITCHELL'S LORIKEET

(*Trichoglossus mitchelli*, G. R. Gray)

By J. M. DERSCHEID, Dr. Sc.

Sterrebeek, Belgium

I was most interested by Mr. W. C. Osman Hill's account of his successful breeding of Mitchell's Lorikeet published in the AVICULTURAL MAGAZINE, August, 1938, page 227. I believe that it is a first record

of breeding in captivity in the United Kingdom, but I think it may be worth while to mention other cases of successful rearing of that interesting kind of Lorikeet on the Continent.

First Record in Belgium.—In December, 1935, I bought from a well-known German fancier a pair of Mitchell's Lorikeets which were reported to have at least once tried to nest at his place. Established here in an indoor aviary they nested for the first time in April, 1936, but they threw their two fertile eggs out of the nest after about fifteen days' incubation, partly eating the contents.

The pair was put in an outdoor aviary at the beginning of July, and on the 15th August two newly-born youngsters, covered with grey down, were seen in the nest; the 29th August the two young were still covered with grey down. On the 10th September they were nearly full size, but not yet feathered except in a few parts; the wing and tail quills were showing themselves in sheaths and there were a few red feathers at the front edge of the wing; but by far the most astonishing thing was that all the fore part of the head was covered with velvety jay black feathers; nothing to be compared with the bluish feathers of the young Swainsons and Red-collared Lorikeets; the black colour is even more intense than in the adult Masked Love bird; the whole of the bill is also deep black at this stage. In the young Swainsons and Red-collared, when leaving the nest, the bill is reddish-black.

The above observations were of some ornithological interest, specially as some modern Ornithologists have supported the view that most of the recognized species of *Trichoglossus* were nothing else than local races of *Trichoglossus hæmatodus*. The fact that the nestling plumage of a Malayan species (*T. mitchelli*) shows such difference with the corresponding stage in two well-known Australian species (*T. moluccanus* and *T. rubritorques*) is definitely opposed to that hypothesis.

The two young birds mentioned above left the nest at the end of September, practically undistinguishable from their parents, except by their blackish bill; they are still alive in my collection (September, 1938).

The above breeding record was brought to the knowledge of

Dr. E. Hopkinson by letter dated 11th September, 1936, and was duly confirmed the same month by MM. Meerschaert and Happe, members of the Council of the Belgian Ornithological Society.

In March, 1937, the same pair of Mitchell's Lorikeets, having been wintered in their outdoor aviary (or more exactly in their brick shelter), nested again, one healthy young being this time reared to maturity. This bird is also still alive, but a little later I had the misfortune of losing the female of my breeding pair.

Nesting records in Holland.—A pair of Mitchell's Lorikeets, owned by Mr. P. W. Louwman of Wassenaar, started to nest in the beginning of February, 1937, and I am told, without definite details, that a young bird was reared. In September, 1937, the pair nested for the second time, but when one of the youngsters was about three weeks old, he died in the nesting box, and the other one died a few days later. A pair of young from the same old pair was born in December, 1937, and reared this time to maturity, the birds being apparently fully adult by mid-March, 1938.

I shall only mention *pro memoria* the first record of the Mitchell's Lorikeets nesting in captivity, which took place in 1897 at the Berlin Zoo, when two eggs were laid but no young reared.

I am trying at the present time to rear in captivity other Lorikeets of the same group (*Trichoglossus cyanogrammus* and *Trichoglossus massenæ*) especially in order to describe their nestling plumage, which I expect will be of the black headed type. Up to now they have not yet shown any desire to nest.

BREEDING RECORDS : SUMMARY III

By Dr. E. HOPKINSON

(Continued from p. 245)

It will be as well here to repeat the meanings of the different printings given with the first part, (p. 191). Capitals indicate that the species (or hybrid) has certainly been bred : large capitals that the record is self-sufficient, small ones that the actual breeding can be taken as

certain (at least in my opinion), but that further detail is desirable. When a name appears in ordinary print, it means that the record is not entirely satisfactory, and when brackets enclose an entry, it is considered at best, doubtful, an added query (?) indicating real doubt and more queries, more doubt.

TANAGERS AND SUGAR-BIRDS

212. THREE-COLOURED TANAGER, *Tangara seledon*. France, 1888.
213. (Superb Tanager, *Tangara fastuosa* ?). Abroad.
FESTIVE TANAGER, *Tangara cyanocephala*. U.K., 1934.
VIOLET TANAGER, *Tanagra violacea*. U.K., 1937.
214. BISHOP TANAGER, *Thraupis episcopus*. U.K., 1915.
215. ARCHBISHOP TANAGER, (Ornate T.). *Thraupis ornata*. First U.K., 1922, and *hybrids* with the female BISHOP TANAGER, (a), U.K., 1925.
SILVER-BLUE TANAGER, *Thr. coelestis cana*. U.K., 1927.
216. WESTERN PALM TANAGER, *Thr. palmarum melanoptera*. U.K., 1912.
217. WHITE-CAPPED TANAGER, *Stephanophorus leucocephalus*. France, 1923.
218. SCARLET TANAGER, *Ramphocelus brasilius*.
219. Yellow-rumped Tanager, *R. icteronotus*. U.K., 1917, but the young died early.
220. BLACK TANAGER, *Tachyphonus rufus*. First, U.K., 1906 ; elsewhere since.
(Magpie Tanager, *Cissopsis leveriana*.) Zoo, 1912, but the single young bird hatched died under a month old.
BLUE SUGAR-BIRD, *Dacnis cayana*. U.K., 1932.
- YELLOW-WINGED SUGAR-BIRD, *Cyanerpes cyaneus*. First, 1928 in Japan ; next by Mrs. Drake in Cornwall, 1934 and the two following years. Was also bred in New Zealand in 1937.

TROUPIALS

221. RED-WINGED BLACKBIRD, *Agelaius phoeniceus*. U.K., 1912, 1913.
222. Tawny-shouldered Blackbird, *A. humeralis*. Berlin, 1888.

223. BROWN-HEADED TROUPIAL, *A. frontalis*. U.K., 1920, and hybrids with the hen Bay-winged Cowbird : U.K., 1928.

(Bay-winged Cowbird, *Molothrus badius* ; the above hybrid record only.)

224. Purple Grackle, *Quiscalus quiscula*. Germany, 1884.

GIRAUD'S ORIOLE, *Icterus giraudii*. Bred in New Zealand in 1933 and 1934 ; three young reared.

STARLINGS

225. COMMON STARLING. " Often bred " *teste* Neunzig.

226. ROSY PASTOR. First : France 1877 ; U.K., 1933. *Hybrids* with the hen Pagoda Myna, (a) are also on record (about 1877).

228. MALABAR MYNA, *Sturnia m. malabarica*.

227. Andaman Myna, *S. m. andamanensis*. U.K., 1901.

WHITE-WINGED MYNA, *S. m. nemoricola*. U.K., 1932.

229. PAGODA MYNA, *S. pagodarum*. Also hybrids with the hen MALABAR MYNA. (U.K., 1927, 28.)

230. MANDARIN MYNA, *S. buffoniana* (Shaw) late *sinensis*, Gm. Germany and France.

231. BLACK-WINGED MYNA, *Gracupica melanoptera*. U.K. and France, 1922.

ROTHSCHILD'S GRACKLE, *Leucopsar rothschildi*. U.K., 1931.

232. COMMON MYNA, *Acridotheres tristis*.

233. INDIAN MYNA, (Bank Myna), *A. ginginianus*.

234. BROWN (or Jungle) Myna, *Aethiopsar fuscus*.

235. Crested Myna, *Ae. cristatellus*. Abroad.

236. GREEN GLOSSY STARLING, *Lamprocolius chalybeus*, (or *L. ch. hartlaubi*.) Also hybrids, *chalybeus* × *purpureus*, France, 1929.

237. Nordmann's Glossy Starling, *L. chalcurus*. Abroad.

238. PETERS' GLOSSY STARLING, *L. sycobius*. U.K., 1925 and since : Whitley (or was it *specularis*. Strickland ?).

239. PURPLE GLOSSY STARLING, *L. purpureus*.

RUPPELL'S LONG-TAILED GLOSSY STARLING, *Lamprotornis purpuropterus*. U.K., 1933.

(Burchell's Glossy Starling, *Chalcopsar australis*), a hybrid record only with the female RED-WINGED STARLING : Whitley, 1926.

(Red-winged Starling, *Onychognathus morio* (or perhaps *O. blythii*); the above *hybrid*.

240. SUPERB SPREO, *Spreo superbus*. First, U.K., 1924; often since.

ROYAL STARLING, *Cosmopsarus regius*. First, U.K., 1930; and a *hybrid*, ROYAL × SUPERB: (Whitley). U.K., 1930.

CROWNED STARLING, *Galeosar salvadorii*. First, U.K., (Ezra), 1931.

WHITE-CAPPED STARLING, *Heteropsar albicapillus*. First and only record: Ezra, 1929, U.K.

AMETHYST STARLING, *Cinnyricinclus leucogaster*. First and only record, Amsler, 1935, U.K.

Malay Calornis, *Lamprovorax p. strigatus*. U.S.A., 1930.

CROWS, ETC.

241. RAVEN. Often bred.

(Cornish Chough. Abroad.)

242, 243. Blue Magpies, *Cyanopica cyana*. All three races, *cyana*, *swinhoi* and *cooki* are on record as having been bred.

244. OCCIPITAL BLUE PIE. First, U.K., 1915.

YELLOW-BILLED MAGPIE, *Pica pica nuttalli*. U.K., 1937.

245. (Jay ?)

246. American Blue Jay. France, 1876.

BEECHEY'S JAY, *Cissilopha beecheii*. U.K., 1936. (*N.B.* Several species appear to be imported under this name; which exactly was bred seems uncertain.)

247. (Satin Bower-Bird.) Error in RECORDS, p. 56; the young were hatched only.

248. AUSTRALIAN CAT-BIRD, *Ailuroedus crassirostris*. Australia and France, 1922.

249. REGENT BIRD. First, U.K., 1905; Australia, 1927.

LARKS, ETC.

250. BLACK LARK, *Melanocorypha yeltoniensis*. U.K., 1899, the only record.

251. Skylark.
 252. CRESTED LARK. U.K. and abroad.
 Wood-Lark. U.K., 1915.
 253. WHITE-CHEEKED FINCH-LARK, *Eremopteryx smithi*.
 254. Pied Wagtail.
 255. WHITE WAGTAIL. U.K., 1913.
 256. Grey Wagtail; and *hybrids* with hens of the Yellow (a) and
 (b) Pied Wagtails; both ? ?).
 257. YELLOW WAGTAIL. U.K., 1913 and 1926.
 258. Tree Pipit.
 259. ROCK PIPIT. One record: U.K., 1912.

TITS, ETC.

260. Great Tit.
 261. Cole Tit.
 262, 263. (Pleske's Tit, *Cyanistes pleskii*, Azure Tit, *C. cyanus*,
 and Blue Tit, *c. caeruleus*. Two ? ? hybrid records only, *pleskii* ×
cyanus and *caeruleus* × *cyanus*.)
 264. Nuthatch. One record: abroad.
 265. White-breasted Nuthatch, *Sitta carolinensis*. One record,
 U.S.A.

WHITE-EYES AND HONEY-EATERS

266. INDIAN WHITE-EYE, *Zosterops palpebrosa*. U.K., 1911, 1915.
 CHINESE WHITE-EYE, *Z. simplex*. Abroad.
 267. NATAL WHITE-EYE, *Z. virens*. U.K., 1915, 1917.
 New Zealand White-eye, *Z. lateralis investigator*. U.K., 1934,
 and a *hybrid* with the female *flavifrons*. U.K., 1936.
 (New Hebrides White-eye, *Z. flavifrons*; the above hybrid.)
 GARRULOUS HONEY-EATER, *Myzantha garrula*. U.K., 1925.
 Spiny-cheeked Honey-eater, *Acanthagenys rufogularis*.
 Australia, 1937.

SHRIKES, ETC.

268. RED-BACKED SHRIKE. Gunther's unique record: 1904
 to 1912. U.K.

Piping Crow, *Gymnorhina tibicens* (or *hypoleuca*). "Successfully bred in England many years ago," *teste* Frank Finn.

Pied Grallina. U.K., 1928, but the young bird died three weeks after leaving the nest.

269. WHITE-EYEBROWED SWALLOW-SHRIKE, *Artamus superciliosus*. U.K., 1908 ; U.S.A., later.

WARBLERS

270. (Tailor-bird, *Orthotomus sutorius*.) India, 1915, but the young birds only lived twenty-two days.

271. Chiffchaff. One record : abroad.

272. Lesser Whitethroat. *ditto*.

273. (Garden Warbler ?)

274. BLACKCAP.

275. AUSTRALIAN BLUE WREN, *Malurus cyaneus*. One record, U.K. Phillips, 1902.

THRUSHES

276. MOCKING BIRD.

277. CURACAO MOCKING BIRD, *Mimus gilvus rostratus*. U.S.S.

278. AMERICAN CAT-BIRD, *Dumetella carolinensis*. U.K. and U.S.A.

279. BLACKBIRD, and *hybrids* with hens of the a. (Grey-winged) and (Song) Thrush.

280. GREY-WINGED OUZEL. First. U.K., 1909, and *hybrids* ; both in the U.K. with hens of a., the BLACKBIRD, b. ARGENTINE BROWN OUZEL.

(Pale Thrush, *Turdus pallidus*.)

(Japanese Brown Thrush, *T. chrysolaus*.)

Hybrids bred in France, 1933.

281. (White-bellied Ouzel, *T. albiventer*. A *hybrid* record only with the male American Robin.)

282. TICKELL'S OUZEL, *T. unicolor*. Zoo, 1904 to 1916.

283. (Red-bellied Thrush, *T. rufiventer* ?)

284. Sorry Thrush, *T. assimilis*. U.S.A.

285. Gray's Thrush, *T. grayi*. France, 1890.

286. OLIVACEOUS THRUSH. U.K., 1924. A success with the Kenya race, *T. olivaceus elgonensis* recorded in 1927. (Partridge, U.K.)

287. ARGENTINE BROWN OUZEL, *T. fuscater*. U.K., 1910.

288. (Mistle-Thrush ? ?)

289. AMERICAN ROBIN, *T. migratorius*, and *hybrids* with the female WHITE-BELLIED OUZEL, (a): Zoo, 1911.

290. Wood-Thrush, *T. mustelinus*. One record: Germany.

291. SONG-THRUSH and *hybrids* with the hen BLACKBIRD.

292. ROCK-THRUSH, *Monticola saxatilis*.

BLUE ROCK-THRUSH, *M. solitaria*. U.K., 1931, and Austria, I think earlier.

294. ORANGE-HEADED GROUND-THRUSH, *Geokichla citrina*. U.K., and France. The White-throated race, *G. c. cyanonota*, is also on record as bred.

KUHL'S GROUND-THRUSH, *G. interpres*. U.K. (Whitley), 1933.

295. REDSTART. U.K., and Germany: one record each.

296. BLACK REDSTART. U.K., 1912.

297. ROBIN.

298. Nightingale.

299. SPROSSER, *Luscinia luscinia*.

300. DAYAL BIRD.

301. SHAMA.

302. STONECHAT. U.K., 1910. One record.

303. WHINCHAT. U.K., 1912. One record.

304. Pied Bush-Chat, *Saxicola caprata*. One record; India, 1915.

Abysinnian Cliff-Chat, *Thamnolaea alboscapulata*. U.K., 1937.

305. BLUE ROBIN, *Sialia sialis*.

WESTERN BLUE ROBIN, *S. s. occidentalis*. U.K., 1937. And the "crossing" of these two races has recently been recorded, (1938).

319. Townsend's Solitaire, *Myadestes townsendi*. Russia, 1912, and 1913.

306. HEDGE-SPARROW.

307. JERDON'S ACCENTOR, *Prunella jerdoni*. U.K., 1909.

Other Passeres

308. (Wren ?)

309. BLACK-HEADED SIBIA. U.K., 1925-31.

CHINESE JAY-THRUSH, *Garrulax chinensis*. U.K., 1932.

310. PEKIN ROBIN.

311. SILVER-EARED MESIA.

312. Blue-winged Siva. One record, 1907, abroad.

313. BEARDED TIT. Two records : U.K., about 1915.

314. RED-VENTED BULBUL and *hybrids* with the female RED-

WHISKERED BULBUL.

315. (Syrian Bulbul, *Pycnonotus xanthopygus* ? ?)

LAYARD'S BULBUL. U.K., 1925.

316. RED-WHISKERED BULBUL, *Molpastes emeria*.317. WHITE-EARED BULBUL, *Otocompsa leucotis*, and *hybrids* :

WHITE-EARED × RED-WHISKERED BULBUL. Abroad.

318. Spotted Flycatcher. U.K., 1914.

Rufous-bellied Niltava. Germany, 1937.

House-Swallow. France, 1935.

320. Crag-Martin. France, 1935.

COURIER WATER-TYRANT, *Fluvicola climazura*. France, 1935.HOODED PITTA, *Pitta cucullata*. France, 1934.(Lyre-bird, *Menura*. Only a ? ? ? *hybrid* record with the

domestic hen !)

Non-Passeres : CUCKOOS TO ROLLERS

321. GUIRA CUCKOO. One record, U.K., 1921.

Indian Coucal, *Centropus bengalensis*. One record : U.K., 1928.322. SENEGAL TURACO, *Turacus persa*.323. FRASER'S TURACO, *T. macrorhynchus*. U.K., 1906.DONALDSON'S TURACO, *T. leucotis donaldsoni*. U.S.A., 1929.324. STRIATED COLY, *Colius striatus*. U.K., 1912, and 1914.ABYSSINIAN BARBET, *Trachyphonus margaritatus*. U.K., 1927.LEVAILLANT'S BARBET, *T. cafer*. France, 1928. (See

L'OISEAU, 1928, 154, 278, 284.)

WHITE-BELLIED WOODPECKER, *Leuconerpes candidus*. U.K., 1937.

325. NIGHTJAR. Germany, 1907. Bred on a hearth-rug in a room.

326. HOOPOE. U.K., 1911, and 1936 ; also abroad.

Kingfisher. In *A.M.*, 1933, p. 91. Hampe says that a brood of six young were reared in an Austrian aviary. (Carniel.)

327. LAUGHING JACKASS. 1905 and 1911. U.K.

328. COMMON ROLLER. U.K., 1901.

LORT'S ROLLER. U.K., 1929.

AN EXPERIMENT WITH GRASS PARRAKEETS

By A. ALLEN

Towards the end of January this year three aviaries were completed to a specification designed by Lord Tavistock. They were built exclusively for Grass Parrakeets. The chief factors incorporated were: thermostatically controlled electric heating, a roomy shelter occupying approximately one quarter of the whole aviary, and a tiled flight containing two recessed openings which permitted contact with the soil, one containing peat and the other filled to the level of the tiling with clean soil. These openings are wired to exclude vermin.

The exact measurements are not of vital importance ; I may remark, however, that the general design and size are the outcome of experience and collaboration with other aviculturists. They are the result of an analysis of factors found in practice suitable for the promotion of avian virility.

Two aviaries were intended to house, respectively, one pair of Splendid Grass Parrakeets (*Neophema splendida*) and one pair of Turquoisines. The third was to house the young, if any.

The stock needs describing, because perfect breeding pairs of Splendids and Turquoisines cannot be had to order. Here then is the known history of the two pairs. Both Splendids were imported

from their breeder, Mr. Harvey, of Australia. The hen came to England in 1932, and prior to coming to us had the following record. In 1933 she reared three rickety young. 1934, one good young one ; 1935, laid but did not hatch ; 1936, laid did not sit. She was tried with two different cocks.

The Cock Splendid was imported in 1937, being then a young bird barely mature.

The Turquoisines' history was as follows : The cock was bred in 1937 by Doctor Derscheid of Belgium. The hen whose age and previous record is unknown, came from Mr. Whitley of Devon. The cock was wintered in one of our bird rooms, and became addicted to plucking, indulging in bouts of gradually diminishing violence. He was not in perfect plumage when we were forced to introduce him to his spouse.

The arrangements for breeding were identical in the case of both pairs. Grandfather clock nest boxes were made and fitted over the gap containing soil. These boxes were constructed of four boards screwed together and lined, in the nesting area, inside and out, with particularly rough bark, there being no perch, and a small hinged inspection door was constructed just above the actual nest level. This was made so as to prevent the entry of draughts and daylight, but was not camouflaged.

The Splendids soon settled down, and in a few days gave evidence of appreciating their environment. The Turquoisines, too, lost no time, and soon nesting operations were in full swing. During incubation the behaviour of the male birds gave some indication of what was happening. At times when the hens were off the nest feeding, the nest-boxes were swiftly examined. The Splendids' nest-box revealed eight eggs, three of which proved infertile and were removed. The Turquoisines had six fertile eggs.

A few days later intensive feeding by both parents indicated the presence of young ; this was soon confirmed by sound. The old birds are eating almost incessantly when the nestlings are growing big, and a considerable amount of food is consumed. Seeding grasses are much appreciated, these having been wisely planted so as to ripen when most wanted. There was also a peat heap on which seed had been thrown down to sprout. Groundsel was supplied, and a blob of

bread and milk was patronized by the Turquoisines. Of course, the normal seed diet consisting of millet, canary, hemp, oats, and sunflower was available, and a liberal supply of spray millet.

A few days before the young were expected to leave the nests, the aviaries were systematically furnished with branches, and in due course five Splendids and six Turquoisines made their debut.

Just prior to the launching of both broods, the hens, who had previously shown signs of wanting to nest again, were given similar nest-boxes, which were installed near the former sites. They were tenanted without delay.

Our next step was to ascertain when the young were independent feeders. Here we had a surprise, for it appeared that when they found food, they recognized it as such, and tackled it almost from the day of leaving the nest. This observation was confirmed in the case of the second broods. Nevertheless, a short period was allowed to elapse to make sure that the young were independent. They were then transferred to the third aviary, which in the meantime had been furnished with branches and feeding arrangements in a similar fashion to the aviary from which they were removed.

Now we were all set for the second round, which, as far as management and results were concerned, was a repetition of the first, except that on this occasion all eggs were fertile, and we bred eight more Splendids and five Turquoisines.

Meanwhile, the first broods had been shown to expert visitors, and Mr. Boosey of Keston, whose work with Grass Parrakeets makes his opinion an extremely valuable one, pronounced them as very satisfactory.

In summing up the lessons from this experiment, I would like to emphasize the point, that the aim of Lord Tavistock was to try to arrive at a type of aviary and aviary management so suitable that all who would like to keep Grass Parrakeets might be able to follow really successful methods.

As far as the Barrington House aviaries are concerned, we have found certain minor details capable of improvement. The changes when made should facilitate routine work, and we hope that eventually we shall assist in evolving an aviary which really is perfect for Grass

Parrakeets. It must be understood, however, that tiled flooring and some of the rather revolutionary ideas involved do not necessarily provide the ideal quarters for Broadtails, or, for that matter, for any species other than those mentioned. On the other hand they may. Time and experience will show.

NOTES FROM SOUTH AMERICA

By SYDNEY PORTER

(Continued from p. 254)

Perhaps one of the most difficult birds to keep in captivity is a Grebe, but I saw several of these birds on the small lakes in the Buenos Aires Zoo. I can hardly see how they obtained much fish when there were so many Pelicans, Cormorants, Egrets, Storks, and Herons about on the same stretch of water, but they must have obtained their food somehow, for they looked in excellent condition. The species exhibited was the Great Grebe, one of the largest of the Grebes, and is more Cormorant-like in shape than the well-known Great Crested Grebe.

I noticed a few examples of Belcher's Gull (*Larus belcheri*) a bird which seems to be restricted to the coasts of the Argentine; there were also some Kelp or Dominican Gulls; in one of the Duck pens were quite a few of these Gulls only a few weeks old. I never saw them being fed with anything, or any food about. I suppose they must have been hand fed by someone.

In the pen with the Ducks were some Penguins, the Magellanic and another which I don't remember and which was very similar to the Little Blue Penguin from the Antipodes, but it was considerably larger. In with these Penguins was a large assortment of indigenous Duck, amongst them were Rosy-bills, Bahama Pintails, Brown Pintails, Grey Teal, which is one of the prettiest of the smaller Duck, Fulvous and White-faced Tree Duck, Blue-winged and Yellow-billed Teal, and last but not least the beautiful little Red Shoveler, a bird I tried hard to

obtain but was not successful. It is the most desirable of the Shovelers.

I had long desired to possess some Screamers, but, never having been able to purchase any in Europe, one of my main objects in coming to the Argentine was to try to obtain some. I felt very elated when I was promised two pairs of these birds by Dr. Orfila but, after being warned that Argentine promises seldom materialized, I refrained from getting too enthusiastic. True to tradition there was the usual last minute hitch and I was unable to obtain them. I rushed back to the bird shop in the Sarmiento where I had purchased a few birds and asked them if they could get me a few "chajas", which is the Argentine name for them, and is pronounced "Shacar" after their cry, which is said to sound like the vernacular for "Come back". The dealer promised to do his best in the short time and in a couple of days he obtained five birds, three young ones and two adults, and although they were quite tame they were wild caught birds. They were kept for me by the dealer in a room with five Rheas which I had previously purchased. Here they were kept for a week before I left for Rosario, a city some good way up the Parana River. I found out afterwards that the wretched birds had only been given alfalfa, which is a kind of lucerne, and soaked bread. Of course being only freshly caught and grazers, they refused the bread and as the alfalfa was very quickly eaten by the Rheas, the birds were, by the time I was ready to go, practically starved to death. I did not see the birds put on the train but when I arrived at Rosario, a long journey from Buenos Aires, I could see that they were dying. We were taken by the shipping agent of the "Royal Mail" on to the docks and, on his promising to get a launch to transport us to the ship which lay some way down the river, we settled down on the quay to await its arrival.

To cut a long story short, we were just dumped on the wharf and left to our fate. For a whole day my wretched birds boiled in the blazing sun on the open quay. I was nearly frantic. I must have 'phoned up at least a hundred times to the agent and used language, for which had the authorities known English I should doubtless have been arrested! At last I managed to get hold of a motor and found the office in the city and I refused to move until a launch was found. By this time

it was evening and my fine male Roseate Spoonbill was dead, my Screamers almost dead, and so were my Rheas. It was terrible. I did everything I could when I got over to the ship, but four of the Screamers died, as did three of the Rheas. The other birds were almost at their last gasp. The only excuse the agent was able to offer was that he expected something might happen ! !

The survivor of the Screamers, a young bird, managed to come round after being hand-fed for a long time on tender lettuce. It was almost too weak to eat this and we had very little of it on board as I had previously ordered a quantity of cabbages ; I thought the bird would eat this, but it refused it and no amount of subterfuge, such as chopping the lettuce and cabbage up finely, would make it. At the next port of call, which happened to be Rio Grande do Sul again, there was a rush to the local market to procure lettuce for the remaining bird which was by now consuming about twenty large ones or fifty small ones a day ! At each port my chief objective was lettuce ; I must have used hundreds ; at all events I got the bird home all right but later on when it was turned into the garden it ate some poisonous plants and died ; so all my labour was in vain. Later on one of the officers of the ship brought me another male bird back with him on his next trip, this was very tame but unfortunately it got into a nearby allotment garden, where the owner beat it to death, his excuse being that he thought it was a wild bird and wanted killing ! Later, he was fined five shillings at the local police court, where the magistrates look upon cruelty as a very minor offence, hardly worth bothering about. So it seems as though I was fated to never possess these birds.

To get back to Buenos Aires, one of the features of the Zoo is the Condors' aviary, certainly the most colossal structure ever built for an aviary. It makes the bird of prey aviaries at the London Zoo look like canary cages ! It must be about sixty feet or more high and is roughly four hundred or five hundred feet in circumference. Here, one saw, besides a whole flock of Condors which could perform their aerial activities with ease, dozens of other birds of prey including many Caracaras of which there were several albino examples and very lovely they looked. There were also the two species of Turkey Vultures and Chilean Sea Eagles, etc. In the centre of the aviary was a huge rock

of granite formation which must have been there in the first instance.

Partly covering this huge aviary was an enormous flowering creeper and flitting in and out of the aviary amongst the Condors were lots of tiny Humming Birds, attracted by the blossoms. It was a unique sight to see in the same aviary the world's smallest and largest flying birds both on the wing together. The Condors took no more notice of the Hummers than if they had been the flies they looked like when compared with the huge birds of prey.

This aviary was certainly unique and it is a pity there are not similar aviaries in European Zoos for the birds of prey ; for I am sure the birds would do better than in the confined spaces where they cannot possibly get any sustained wing exercise.

The Parrot House in the Gardens is an amazing structure, resembling some Eastern Mosque, with towers, domes, and minarets. I rather think that the builder, in his enthusiasm, forgot about the parrots or whatever kind of birds the place was intended to house ; consequently the aviaries which seem to be quite an afterthought, resemble nothing so much as enlarged eighteenth century Canary cages, stuck on the main building at various angles, and appear to be the acme of futility and inconvenience.

There were quite a few interesting parrots however, the rarest of which was a Glaucous Macaw. It was the first time I had seen an example of this very rare bird. It had, I was given to understand, been in the collection for over twenty years and was known to be over forty-five years of age. Although its plumage was in very good condition the bird was evidently suffering from senile decay. Besides this, were Hyacinthine, Red and Blue, Red and Yellow, and Blue and Yellow Macaws, also such exotics as Grey Parrots, Lesser Lemon Crested, and Leadbeater's Cockatoos and the *Ara maracana* or Illiger's Macaw. Of native parrots there were several of the very rare Maximilian's Pionus from the North Argentine, the most beautiful of the Pionus Parrots and a bird I had not seen before. These I understand are not uncommon in the remote districts where they live and are shot as a pest. There were many Quaker Parrakeets, which are still common in the Argentine. I saw a cage full of baby ones in the Sarmiento bird shop

and I was very tempted to buy them, but I felt that I had enough parrots at home. In one of the aviaries of this grotesque Parrot house were a great many Nanday Conures looking much larger and brighter than any I have ever seen in England. There were also specimens of the large and dull-coloured Patagonian Conure, a bird which many years ago was common around Buenos Aires. It has long since disappeared and is now only found in the remote parts of the Argentine and Patagonia. I met one very old settler who knew a good deal about the Argentine, and he told me that though the bird was common in the old days he had not seen any for many years. This Parrot had more or less adapted itself to life on the treeless pampas, living and feeding on the ground, also nesting in holes in the cliffs or high banks, and it was known as the Bank or Burrowing Parrot. It must be many years now since these birds were imported into this country but I remember seeing a specimen a few years ago at the London Zoo.

I looked in vain for examples of another Argentine Parrakeet, the Slight-billed Parrakeet (*Bolborhynchus aymara*), a small, delicately coloured parrakeet not much larger than a Budgerigar which I understand is not uncommon in the southerly parts of the Argentine.

There were several other rare Parrakeets and Conures but I lost my notes regarding these.

As I have run on a greater length than I intended regarding the birds in the Buenos Aires Zoo, I must not enumerate any more, sufficient to say that there were a great many other birds, such as Darwin's Rheas, a rare relative of the Common Rhea which inhabits the chilly regions of Patagonia, Jabirus, also many Ibis, Herons, Guans (including a very rare black and white one, *Pipile jacutinga*,) Curassows, Penelopes, many birds of prey, native Doves and Pigeons and Waders too numerous to mention.

I hoped whilst in the Argentine to make a stay in some out of the way district in the far north of that country, and made a short study of the bird life there, particularly that of the Waders and Herons, but the attractions of Buenos Aires proved too great, hence the scrappiness of these notes. There are few more attractive places in the world than Buenos Aires, and none I regretted leaving so much as that beautiful city. However I made excursions to the Delta of the Parana River and

there saw, for the first time in a state of freedom, an old favourite of mine, namely the Guira Cuckoo, to my mind one of the strangest of birds. I had kept these birds some years ago and always fancied that they were not in good condition, their feathers always seemed loose and ill-fitting, their wings and tail always blowing about as though they were not properly fixed to the body. They never seemed at home either in the trees or on the ground. In his own home I expected to find him a different bird, sleek and happy and in his proper environment, but no, he was the same unfinished kind of bird that I knew as my pets years ago. The first I saw was when we were sailing down the Parana River; they were in the weeping willows and the upstanding poplars, and they seemed equally as ill at ease as the ones I had had at home. Hudson in his *Birds of La Plata*, says, "it is not yet quite in harmony with its environment. Everywhere its habit is to feed exclusively on the ground in spite of possessing feet formed for climbing; but its very scanty plumage, slow laborious flight, and long, square tail, so unsuitable in cold boisterous weather, show that the species is a still unmodified intruder from the region of perpetual summer many degrees nearer to the equator."

In general appearance, especially in general shape and plumage, they look like a very small edition of that unique bird, the Hoatazin, and one is apt to think that the resemblance is perhaps more than superficial, and I would think that from its general demeanour it is nearer to that bird than to the Cuckoos to which it is supposed to be related. This may sound very ridiculous to the museum ornithologist, but he has only dried skins to go by.

I was once wandering round a well-known bird store and happened to see three of these birds and was at once struck by their very quaint appearance, so I agreed to take a pair, but seeing that they were so devoted to each other and hating to leave the odd one which would, no doubt, linger in the store indefinitely, I took all three and never regretted my purchase.

From the first, all three were absolutely fearless. The minute I entered their aviary, they were all over me, on my arms, head, or shoulders. Whatever one did the others did: the three seemed to move in unison, in a kind of "follow my leader style". The birds seemed to

be mainly terrestrial, but they always used to perch at night, though in the day-time, if not on the ground, they perched on the lowest branches.

In appearance they were extremely un-Cuckoo like, being exceedingly long and thin, and I think they could have passed with ease through a napkin ring. Of a light fawny brown, they are heavily striped on the upper parts with dark brown and black. With their long loose and upstanding crests and peculiar white iris of the eyes, they had a strange wild and un-bird-like look.

Unfortunately they appear to be delicate and very sensitive to cold and during one winter, when I was ill, the heating was allowed to go off in the bird room, consequently I lost all three of these charming birds. They fed mainly on soft food with a liberal supply of raw meat and mealworms.

When I first had them, they would only feed from the hand, so I suppose that they must have been hand-reared. They were one of the few birds I have kept which did not mind being handled and they might have been for all the world some strange mechanical toys. If one picked them up by the back they would keep quite still until they were put down again when they would make a short almost automatic run and then stand still again waiting to be picked up. Their cry was certainly like that made by an automaton and was something like the sound made by a very loud rattle. I was very sorry to lose them, for I have never again had such delightful pets.

The eggs of this bird are certainly the most remarkable in the world. They are large for the size of the bird, being about the size of a Wood Pigeon's. Hudson says, "They are elliptical in form and beautiful beyond comparison, being of an exquisite turquoise blue, the whole shell roughly spattered with white. The white spots are composed of a soft calcareous substance, apparently deposited on the surface of the shell after its complete formation: they are raised, and look like snow-flakes, and when the egg is freshly laid may be easily washed off with cold water, and are so extremely delicate that their purity is lost on the eggs being taken into the hand."

Closely allied to this bird is the Ani, another strange bird whose general demeanour is very much like that of the Guira Cuckoo. It is

very common in the West Indies and in Central America, where it usually lives around meadows in which cattle are kept. Strange to say I saw many of these birds around the docks at Santos in Brazil, usually perched on the telephone wire.

The first "birdy" sound one hears upon entering the Argentine is the loud, joyous chortle of the Oven-bird, and after being in that country for a short time one finds that it is the most characteristic sound of that land. To quote Hudson again, he says, "At frequent intervals during the day, the male and female meet and express their joy in clear resonant notes sung in concert. . . . While thus singing they stand facing each other, their necks outstretched, wings hanging, and tail spread, the first bird trembling with its rapid utterances, the second beating on the branch with its wings."

In gardens, in the public parks, out on the pampas, by the sides of broad, slow flowing rivers, one continually hears these bursts of joyous melody, though perhaps the birds are not always to be seen. At first one thinks he looks rather Thrush-like, that is when he is standing still, but when he moves he has the quicker, business-like gait of a Starling. The Oven-bird is equally at home in the trees, on the ground, or on the house itself.

In colour the bird is an earthy brown, the back and tail being bright chestnut, which rather gives it a Thrush-like appearance, but on close acquaintance, one sees the long, slender beak and legs.

The most remarkable characteristic about the bird is the unique nest which it builds and from which it gets its name. It is a large structure, shaped like an old-fashioned baker's oven, with the entrance at one side, but this is long and narrow and leads to an inner chamber. These nests take a considerable time to make, often many months, as the birds can only work during wet weather when there is plenty of mud. The birds take pieces of fibrous material such as hairs, roots, etc., to a puddle and work them into small balls which they then work into the nests. These nests are usually built in the most conspicuous places, such as the top of a gate post, a low horizontal branch of a tree, on a house, etc., and they are so strong that it is very difficult to break them.

The only nests which I saw were on the stout limbs of fruit trees

and the entrance always seemed to face the trunk. I imagine that trying to breed Oven-birds in an aviary would be a fascinating study. I once had the chance of buying some, and had I have known as much about them as I do now I should not have let the opportunity slip. I was unable to get hold of any in the Argentine.

I purchased a pair of beautiful Jays which I think are seldom imported into this country, namely the Azure Jay from Paraguay; a bird somewhat larger than the European Jay, the male deep black, slightly crested, with the back, wings, and tail a bright smalt blue, the hen being a peculiar shade of ashy-violet.

In the bird shop in Buenos Aires were many Owls, mainly the well-known South American Burrowing Owl, but there was one pair of tiny Owls not much larger than Sparrows, looking like miniature editions of the well-known Tawny Owl. They were very tame and quite the most attractive Owls I have ever seen, so I thought I would buy them and give them to a Zoological Garden, as I do not usually keep birds of prey; however when I got them home everyone was so attracted by them that I decided to keep them. After they had moulted they seemed very much larger than they were before, I suppose it was because previously their feathers were worn and bedraggled. These birds were either *Glaucidium brasiliensis* or *G. obsкуро*, the former I think is known as the Brazilian Pigmy Owl.

These birds did an extraordinary thing, which showed they must have a fair share of intelligence. Of course I could only feed them on the voyage home on meat. On their cage, which was an all-wire one, was a piece of old sacking to keep out the draughts. Before the birds ate their meat they pulled a large quantity of the sacking into a fine hair-like fluff, and in this they rolled their meat so that they would be able to cast up pellets which are necessary for their digestion. Their beaks are so tiny that one can hardly feel a nip if they try and bite one's finger.

I saw many other birds in the Argentine, but I am afraid that I must desist now, for I think I have already overrun my allotted space. There are, however, two others which I feel I must mention because they are so characteristic of the Argentine, namely the Spur-wing Plover (mentioned before) and the Ypecaha Rail. The former are extremely

aggressive and in the breeding season they will not hesitate to attack anything which approaches the nest. They are very much in evidence on the pampas, their habits seem very much the same as the European Lapwing, except that they do not seem to flock and their demeanour is much more obtrusive. They become very attached to certain territories and never leave them ; hence when once they are domiciled in a garden they “ stay put ” as our American friends say. There were many of these birds at liberty in the Buenos Aires Zoo, which came up to visitors in the hopes of some tit-bits or scraps left over from a picnic lunch. I didn't see anyone feeding them on peanuts, as they doubtless would have done had they have been in the London Zoo !

The other bird, the Ypecaha Rail, is a bird of outstanding personality, and in its bold and aggressive demeanour reminds one of the Wekas of New Zealand. It is a large bird about the size of a Fowl. Although not possessing any brilliant colours, it is a very beautiful bird. There were quite a few loose in the Buenos Aires Zoo and these seemed very aggressive, coming up and snatching food from the hands of the visitors, especially from children who were perhaps eating a biscuit or piece of chocolate. When these birds are not persecuted they become very bold, entering villages and even houses. I would have liked to have brought a pair of both species home with me, but they are noted for their extreme loquacity. The noise this bird can make is well-nigh incredible, so I had to desist for unfortunately I am continually receiving letters from irate neighbours threatening law proceedings if I do not keep my birds quiet, but I can hardly blame them, for the calls of either Eclectus or Argus Pheasants are hardly soothing to one's nerves !

(To be continued.)

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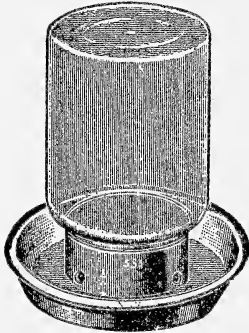
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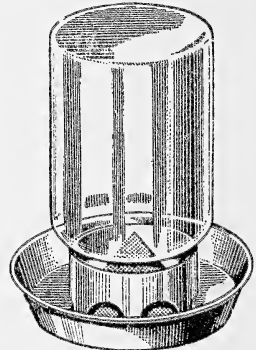
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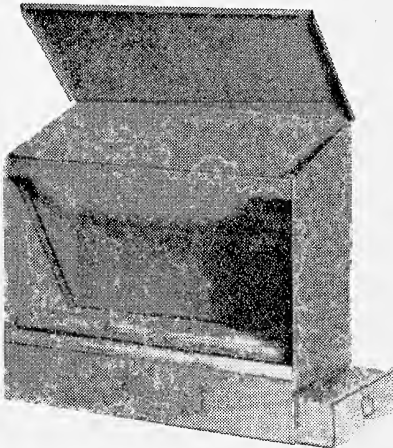
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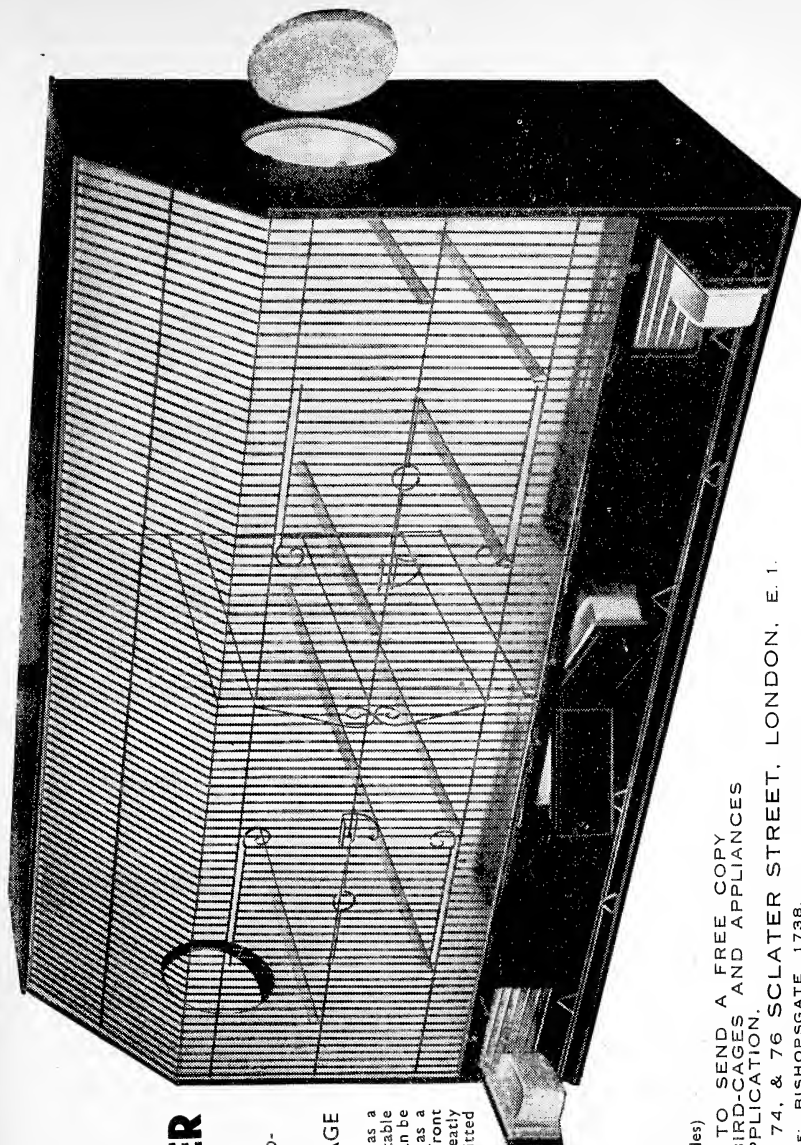
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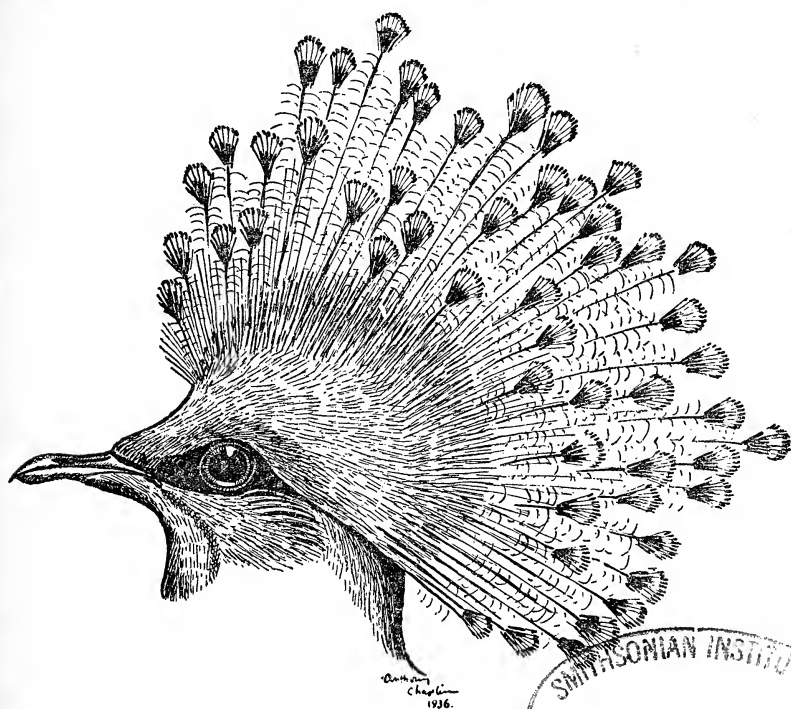
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FOUNDED 1894

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THE RED-BELLIED TANAGER

Pæcilothraupis lunulata atricrissa Cab.

By C. S. WEBB

The Red-bellied Tanager is found in the Andes of South America at high altitudes from Colombia to Peru, but the race *P. l. atricrissa* is confined to the Eastern and Western Andes of Ecuador.

It inhabits the well-wooded temperate regions where the nights are very cold and where, especially in the rainy season, the countryside is frequently enveloped in cold mist.

It belongs to a group of large Tanagers which might be called Mountain Tanagers as they are confined to the Andes and include such magnificent genera as *Pæcilothraupis*, *Buthraupis*, and *Compsocoma*. They are all large and mostly very beautiful.

The Red-bellied Tanager is usually to be seen at altitudes ranging from 10,000 to 12,000 feet, but it is now getting very scarce on the western slopes of the Andes owing to rapid destruction of the forest by woodcutters and charcoal burners who get an easy living supplying Quito with fuel. Fortunately the eastern Andes are rather distant from the capital and a journey there necessitates travelling three days by mule, with a pass 14,000 feet high to be crossed. When this freezing cold atmosphere is left behind and one descends to about 12,000 feet, the scene changes to wonderful dense primitive forest, untouched by the ravages of civilization, where birds can easily find an

abundance of their natural food in mountain scenery of indescribable beauty. It is here that Red-bellied Tanagers thrive, there being an endless variety of edible berries on which they subsist, supplemented with a few insects.

They are conspicuous birds and can frequently be seen perched on the top of a bush or tree piping their cheerful call-notes which remind one of the African Bulbuls (*Pyrenonotus*). In contrast with some of the Tanagers from lower regions they are easily approached in their wild state and become tame almost immediately after capture, a fact which applies equally to nearly all high Andean birds. In captivity I imagined they would be suited to an aviary rather than a cage life as they are active creatures and when allowed plenty of exercise can stand any amount of cold wet weather. It is also when in flight that the exquisite coloration of the back and wing-coverts (shining blue) is seen to advantage. This contrasting with the black of the upper parts and the scarlet of the lower parts combines to make the Red-bellied Tanager one of the most beautiful of the larger Tanagridæ. There is very little difference in the coloration of the sexes, but the red parts of the female are not quite so brilliant. They are usually to be seen in pairs, although a number may congregate in a tree which is laden with their favourite berries. Their local Spanish name is "Platero".

BREEDING RECORDS : SUMMARY IV

By Dr. E. HOPKINSON

(Continued from page 286)

PARROTS

329. BLACK LORY, *Chalcopsitta ater*. U.K., 1909 and 1910.

VIOLET-NECKED LORY, *Eos variegata*. France, 1926.

330. CHATTERING LORY, *Domicella garrula*. U.K., 1913.

331. BLACK-CAPPED LORY, *D. lory*. U.K., 1913.

332. FORSTEN'S LORIKEET, *Trichoglossus forsteni*. Also hybrids with the hen RED-COLLARED LORIKEET, U.K., 1927 onwards.

Trichoglossus hæmatodus, Edwards' Lorikeet, and Lory hybrids, *Eos histrio* x *E. variegatus* were bred in the U.S.A. in 1931, teste L'OLSEAU, 1932. 705, 706.

334. (Black-throated Lorikeet, *T. hæmatodus nigrigularis*.) Only a *hybrid* record with the male RED-COLLARED.

335. SWAINSON'S LORIKEET, "Blue Mountain Lory," and *hybrids* :

SWAINSON'S × CHATTERING LORY (b). U.K., 1912.

SWAINSON'S × RED-COLLARED (a). U.K., 1917.

336. RED-COLLARED LORIKEET, *T. rubritorques*, and *hybrids* with the female BLACK-THROATED L. (a). Belgium, 1912.

MITCHELL'S LORIKEET, bred in Ceylon and Belgium, 1938. (*A.M.*, 1938, 227, 276.)

337. Ornate Lorikeet, *T. ornatus*, France, 1883; and *hybrids* Ornate × Scaly-breasted L. (a). Germany.

338. SCALY-BREASTED LORIKEET, *Eutelipsitta chlorolepidoata*. France, Germany, and U.K.

333. MRS. JOHNSTONE'S LORIKEET, *Eu. johnstoniæ*. U.K., 1906.

VARIED LORIKEET, *Psitteuteles versicolor*. One record; U.K. (Keston), 1936.

339. Musky Lorikeet, *Glossopsitta concinna*. Germany, 1903.

340. STELLA'S LORIKEET, *Charmosyna papuensis stellæ*. U.K., 1910.

341. Fair Lorikeet, *Charmosynopsis pulchella*. U.K., 1914.

TAHITI BLUE LORY, *Coriphilus peruvianus*. U.K., 1937 (Tavistock).

342. GANG-GANG COCKATOO. France, 1921, and following years U.K., 1938.

343. (Great White Cockatoo.) A *hybrid* record only with the hen Leadbeater's C.

344. GREATER SULPHUR-CRESTED COCKATOO.

345. LESSER SULPHUR-CREST.

346. LEADBEATER'S COCKATOO.

347. BARE-EYED COCKATOO, *Ducorpsius sanguineus*. U.K., 1907; Holland, 1926; New Zealand, 1937.

348. ROSEATE COCKATOO, "Galah," and *hybrids* : a. ROSEATE × Greater Sulphur-crested Cockatoo. U.K., 1911. (*N.B.*—The original entry, No. 344, a. (this cross vice-versa) was an error.)

b. ROSEATE × LESSER SULPHUR-CREST. U.K., 1907.

349. COCKATIEL. Commonly bred.
350. BLUE AND YELLOW MACAW, *Ara ararauna*.
351. Scarlet Macaw, *A. macao*.
352. (Military Macaw, *A. militaris*.) *Hybrid* record only.
353. Green-winged Macaw, *A. chloroptera*.
Macaw Hybrids :
A. ararauna × *macao*. California, 1936, *teste* Delacour, *A.M.*, 1937.
A. ararauna × *chloroptera*. Dresden, 1897.
A. macao × *militaris*. Italy about 1900.
A. chloroptera × *ararauna*. New Zealand, 1931 onwards.
354. ILLIGER'S MACAW, *Ara maracana*. Zoo : 1931.
355. YELLOW CONURE, *Eupsittula solstitialis*. France, 1883 ; there is also a *hybrid* record with the female Golden-crowned Conure (a) : France, about 1870.
356. YELLOW-HEADED CONURE, *Eu. jendaya*. At least three records ; also *hybrids* with hens of a. the Brown-throated (U.K., 1905), and b. the GOLDEN-CROWNED CONURE. U.K., 1913.
360. BROWN-THROATED CONURE, *Eu. æruginosus*. U.K., 1908.
361. BROWN-EARED CONURE, *Eu. ocularis*. U.K., 1915.
362. GOLDEN-CROWNED CONURE, *Eu. aurea*. Germany and U.K.
Petz's Conure, *Eu. canicularis*. U.S.A.
358. GREEN CONURE, *Aratinga leucophthalma*. France in early days : Australia recently.
Red-masked Conure, *A. rubrolarvata*. U.K., 1925.
359. Cactus Conure. *A. cactorum*. U.K., 1914.
357. BLACK-HEADED CONURE, *Nandayus nanday*.
363. CAROLINA CONURE, *Conuropsis carolinensis*. Several records for America and Germany in the old days, but none for the U.K., of the breeding of this extinct (or almost extinct) Parrakeet.
365. WHITE-EARED CONURE, *Pyrrhura leucotis*. Also a *hybrid* record with the hen Red-bellied Conure (a).
- 366, 367. Red-bellied Conure, *P. frontalis* and *P. f. chiripepe*. Both these races on record as bred.

(Lucian's Conure, *P. luciani*.) The birds recorded under this name were all "*vittata*" (= *frontalis*), *teste* Delacour.

364. SLIGHT-BILLED PARRAKEET, *Enicognathus leptorhynchus*. One record: Holland, 1913, 1916.

368. QUAKER PARRAKEET, *Myopsitta monachus*.

369. Lineolated Parrakeet, *Bolborhynchus lineola*. Germany, 1901.

370. BLUE-WINGED PARROTLET, "Blue-winged Lovebird." *Forpus vividus* (Ridgw.) *passerinus aucct.* NOT L.

371. PASSERINE PARROTLET, *F. p. passerinus* (Linn) and *F. p. viridissimus* (Lafr.). Both races have been bred.

Blue-rumped Parrotlet, *F. cyanopygius*. U.K., 1907.

(Spectacled Parrotlet, *F. conspicillatus*.) A *hybrid* record only: Spectacled × Blue-winged Parrotlet (*vividus*). California, 1931. (See Plath, *A.M.*, 1933, p. 112.)

372. ALL-GREEN PARRAKEET, *Brotogetis tirica*. Abroad and U.K.

373. TOVI PARRAKEET, *B. jugularis*. Germany; no U.K. record.

ORANGE-FLANKED PARRAKEET, *B. pyrrhopterus*. U.K., 1925.

374. (Blue-fronted Amazon?) A *hybrid* Bluefront × Festive Amazon bred in Derby, 1936, *teste* S. Porter.

375. (Orange-winged Amazon, *Amazona amazonica*?)

376. (White-fronted Amazon, *A. leucocephala*.) A *hybrid* record; White-fronted × Blue-fronted Amazon, a. Germany, 1885.

(Green-cheeked Amazon, *A. viridigenalis*.)

(White-browed Amazon, *A. albifrons*.)

Four *hybrids*, GREEN-CHEEKED × WHITE-BROWED were bred by Whitley in 1934.

(Black-headed Caique, *Pionites melanocephalus*.)

(White-bellied Caique, *P. leucogaster*.)

Lady Poltimore bred a *hybrid* BLACK-HEADED × WHITE-BELLIED CAIQUE in 1926.

White-crowned Parrot, *Pionus senilis*. U.K., 1934.

377. GREY PARROT. First record: France before 1822.

378. GRAND ECLECTUS, *Lorius roratus*. First: Germany, 1881; since then in the U.K. Also a *hybrid* record with the CERAM ECLECTUS: Germany, 1888.

379. (Ceram Eclectus, *L. cardinalis*.) The above *hybrid*.

RED-SIDED ECLECTUS, *L. pectoralis*. Bred in Ceylon, 1938. (*A.M.*, 1938, 223.)

Blue-crowned Parrakeet, *Tanygnathus lucionensis*. U.S.A., 1836.

380–382. ALEXANDRINE PARRAKEET. All the three races, *eupatria*, *nipalensis*, and *magnirostris* are on record as bred. Mr. Ezra bred his first blue ALEXANDRINE in 1934.

383, 384. RINGNECK PARRAKEET.

The Indian race, *Psittacula k. manillensis* has often been bred, the African *P. k. krameri* perhaps once or twice.

Layard's Parrakeet, *P. calthrapæ*. U.K., 1925.

MALABAR PARRAKEET, *P. melanorhyncha*. U.K., 1927 and 1931.

Javan Parrakeet, *P. alexandri*. Bred at the Adelaide Zoo, South Australia, 1936–7.

385, 386. BLOSSOMHEAD, *P. cyanocephala*. Both the Indian and Burmese races have been bred.

(Slaty-headed Parrakeet, *P. himalayana*.) Only a *hybrid* record: SLATY-HEADED × BLOSSOMHEAD. Tavistock, 1933 and 1936.

DERBYAN PARRAKEET, *P. derbyana*. First, U.S.A., 1930; since then U.K. and elsewhere.

387. (Hanging Parrakeets, *Loriculus*. Two? records for *L. galgulus* and *L. vernalis*.)

388. BARRABAND'S PARRAKEET and *hybrids*:

a. BARRABAND'S × Black-tailed Parrakeet.

b. BARRABAND'S × ALEXANDRA PARRAKEET. U.K., 1922. BARRABAND'S × (Rosella?).

BARRABAND'S × KING PARRAKEET; Tavistock, 1937. U.K.

389. BLACK-TAILED PARRAKEET, "Rock Peplar." *Hybrids* with hens of a. Barraband's, and b. the Alexandra Parrakeet are recorded.

390. ALEXANDRA PARRAKEET. First, U.K., 1912; since then elsewhere. Also *hybrids*:

a. (Alexandra × Black-tailed Parrakeet?)

b. ALEXANDRA × CRIMSON-WING. U.K., 1925.

391. CRIMSON-WING. And *hybrids* with hens of the BLACK-

TAILED PARRAKEET (Whitley, 1928 onwards), and SULA ISLAND KING (Tavistock, 1927).

392. KING PARRAKEET, *Aprosmictus cyanopygius*. Also *hybrids* with the females of a. BARRABAND'S PARRAKEET, U.K., 1936, and the Crimson-wing.

(Sula I. King, *A. amboinensis sulaensis*.) Only a *hybrid* record with the male CRIMSON-WING.

Red-faced Lovebird, *Agapornis pullari*. Has been bred in Germany, *teste* Hampe.

393. MADAGASCAR LOVEBIRD, *A. cana* (and a cross with the hen Budgerigar (a) ?)

394. ABYSSINIAN LOVEBIRD, *A. taranta*.

395. PEACH-FACED LOVEBIRD, *A. roseicollis*. Frequently bred. Also *hybrids* with the hen MASKED L.

396. BLACK-CHEEKED LOVEBIRD, *A. nigrigenis*. Frequently bred, and the crosses BLACK-CHEEKED × PEACH-FACED (a) and further crosses; × MASKED and further crosses, and Page included the cross with (the hen Budgerigar (b) ? ?)

MASKED LOVEBIRD, *A. personata*. Frequently bred, and *hybrids* with female NYASA and FISCHER'S LOVEBIRDS.

FISCHER'S LOVEBIRD, *A. fischeri*. First importation, a single bird, 1925; first breeding success, Tavistock, U.K., 1927. Since then fairly commonly bred, and *hybrids* with hens of the PEACH-FACED, NYASA, and MASKED LOVEBIRDS.

NYASA LOVEBIRD, *A. lilianæ*. First success, U.K., 1926. Since then often, and *hybrids* with hens of the PEACH-FACED and BLACK-CHEEKED LOVEBIRDS.

397. PENNANT'S PARRAKEET, *Platycercus elegans*. Fairly often bred.

398. ADELAIDE PARRAKEET, *P. elegans adalaidæ*, a subspecies of the Pennant. First bred U.K., 1907. *Hybrids*:

a. Pennant × Rosella.

b. Pennant × Yellow-naped Parrakeet, 1905.

Adelaide × Rosella. U.K., 1892.

399. YELLOW-BELLIED PARRAKEET, *P. caledonicus*. First success,

Tavistock, 1934 ? Have they been bred since ? *Hybrid* records are : YELLOW-BELLIED × ADELAIDE, and Y.-B. × ROSELLA and further crosses.

400. YELLOW-RUMPED PARRAKEET, *P. flaveolus*. First success, U.K., 1904. The cross with the hen Rosella (a), is also on record. U.K., 1905.

401. MEALY ROSELLA, *P. adscitus palliceps*. And *hybrids* with female ROSELLA and BARNARD'S PARRAKEETS.

402. ROSELLA, *P. eximius*. Often bred ; also *hybrids* : a. Rosella × Mealy Rosella ; b. × Stanley Parrakeet ; c. × Yellow-naped ; d. (× Redrump).

403. STANLEY PARRAKEET, *P. icterotis*. *Hybrids* :

Stanley × Rosella. Germany, 1935, and a further cross.

Stanley × Pileated Parrakeet. California, 1929.

BROWN'S PARRAKEET, *P. venustus*, 1928 (and ? an earlier record), 1935, 1938 ; all U.K.

404. PILEATED PARRAKEET, *Purpureicephalus spurius*. First success, U.K., 1909 ; since then elsewhere.

405. BARNARD'S PARRAKEET, *Barnardius barnardi* ; and *hybrids* with hens of a. the YELLOW-NAPED and REDRUMP Parrakeets.

406. YELLOW-NAPED PARRAKEET, *B. zonarius semitorquatus*. Bred at the Zoo in 1912. Crosses with hens of the following are also on record. a. Barnard's, b. Bauer's, c. Yellow-bellied Parrakeet.

407. BAUER'S PARRAKEET, "Port Lincoln," *B. zonarius*. Bred in Germany and France, but I have no record yet for the U.K. ; *hybrids* with the hen MEALY ROSELLA (a) were bred here in 1924.

408. BLUEBONNET. Both races, *Northiella h. hæmatogaster*, the yellow-vented, and *N. hæmatogaster hæmatorhous*, the red-vented, have been bred. Whitley bred *hybrids*, BLUEBONNET × REDRUMP, in 1931.

409. Beautiful Parrakeet, *Psephotellus pulcherrimus*. Bred in Austria, 1880 ; *hybrids* with the hen Redrump (a) are also on record (Belgium).

410. (Golden-shouldered Parrakeet, *Ps. chrysopterygius*.) Only a *hybrid* record (1901), with the female Many-coloured Parrakeet (a).

411. HOODED PARRAKEET, *Ps. dissimilis* (late *cucullatus*). First success, 1912 ; since then at least six times : U.K. and Australia.

412. MANY-COLOURED PARRAKEET, *Psephotus varius* (late *multicolor*). First, France, about 1877 ; since then U.K. and elsewhere.

413. REDRUMP, *Ps. hæmatinotus* : and *hybrids* with hens of the ROSELLA (a) ; Mealy Rosella (b) ; Bluebonnet (c) ; and Hooded Parrakeet.

414. BOURKE'S GRASS PARRAKEET, *Neopsephotus bourkii*.

415. BLUE-BANDED GRASS-PARRAKEET, *Neonanodes chrysostomus*.

416. ELEGANT GRASS-PARRAKEET, *N. elegans*, and *hybrids* with the hen Turquoise.

417. Rock Grass-Parrakeet, *N. petrophilus*. Bred by Russ teste Russ.

418. TURQUOISINE, *N. pulchella* : and *hybrids* :

TURQUOISINE \times ELEGANT. Whitley.

TURQUOISINE \times Splendid Grass-Parrakeet. Zoo, 1936.

419. SPLENDID GRASS-PARRAKEET, *N. splendidus*. The Zoo record, 1872, was an error. The first breeder was Harvey in Adelaide, 1932 ; he found them easy to breed and has continued to do so every year since. First bred in the U.K., 1934.

420. NEW ZEALAND PARRAKEET (Red-fronted N.Z. Parrakeet), *Cyanoramphus novæzelandiæ*. Formerly quite commonly imported and bred.

421. GOLDEN-CROWNED N.Z. PARRAKEET, *C. auriceps*. Bred several times abroad in early days. The first British record was Bouskill's, 1898, and there have been more recent U.K. successes (1934, 1937). A *hybrid* with the hen *novæzelandiæ* was once bred at the Berlin Zoo teste Neunzig.

422. Alpine Parrakeet, *C. malherbi*. One record : France, 1882.

423. HORNED PARRAKEET, *Nymphicus cornutus*. Neunzig gives two early French records and of *hybrids* with the female Uvæan Parrakeet (a).

424. (Uvæan Parrakeet, *N. uvæensis*. The above *hybrid* record only.)

424. BUDGERIGAR. Universally bred and colour-varieties galore.

426. SWIFT PARRAKEET, *Lathamus discolor*. First, France, 1887; first for the U.K., 1936.

427. (Night Parrakeet, *Geopsittacus occidentalis*.) Bred by Russ teste De Brisay.

NOTE.—Dr. Hopkinson will be out of England till the end of April or May. This will not, he hopes, prevent additions and corrections to the breeding summary coming in.

THE BLACK AND CRIMSON ORIOLE

Oriolus cruentus malazanus

By P. H. MAXWELL

In the London Zoo are two most beautiful birds from Malay—the Black and Crimson Orioles. The adult male of this bird has glossy black plumage with a greenish cast, primary coverts decomposed deep blood-red, the primaries beneath them white, a large patch of deep crimson on the breast, bases of feather white, inner aspect of wing sooty brownish black. The female is almost as glossy as the male above, but has no blood-red on the primary coverts, the lower breast and belly is greyish, broadly mottled with black and a faint suggestion of wine-red on the edge of the feathers. The young are like the female but duller and the lower surface is paler and greyer, sometimes with rusty edges, the red feathers gradually appearing in the young males—the primary are the last to become completely red—it is probable that it takes about two years to acquire complete adult plumage. The iris of this bird is chestnut, red bill, and the feet are bluish horn coloured. The total length is 9 to 9·5 inches, wing 5·2 to 5·7 inches, tail 3·9 to 4·1 inches, tarsus 0·9 to 1 inch, bill from gape 1·25 inches, culmen 1 inch. The nesting habits of this bird are unrecorded. It is nearly always found about 3,000 feet, but it has been seen in Kinta, Perak, at quite low altitudes. Being quiet and retiring in its habits, it is not often observed—living alone or in pairs in heavy forests where big trees abound. Its range is from Northern Perak to Southern Selangor in the Malay Peninsula. There is a very closely allied Oriole to this species which has the primary coverts entirely blood-red, except for a narrow basal black bar, and the patch of blood-red on the breast is of larger extent.



THE BLACK AND CRIMSON ORIOLE
Oriolus cruentus malazanus

[To face p. 308.]

NOTES FROM AUSTRALIA

By SYDNEY PORTER

My visit to Australia was undertaken, not so much because I wanted to go there, although I always hoped to visit it one day, but more or less as a kind of duty. People knowing that I travelled a good deal always used to say, "Now when you were in Australia, etc.," and I shamefacedly had to admit that I had never been there!

Australia had never seemed a far distant or even remote country; it had always seemed strangely near and familiar, possibly because I had always been interested in the Australian avifauna and for years had made a study of it. And as it so often is with familiar places we seem to have a habit of putting off visiting them until we have seen other places first. Algeria, Sicily, Egypt, Rhodesia, all seemed to me so much farther away than Australia.

Perhaps it was a good thing that I did visit other countries first for had I gone to Australia in the first place I might not have wanted to go elsewhere! From the little I saw of it during a two months' stay or more I can definitely say it is one of the most attractive countries I have ever been to, and one which every English person, if he has the time and cash, should visit. Its cities, Adelaide, Melbourne, and Sydney, are finer, cleaner, and more friendly than any cities in Europe, but it is the birds we want to talk about, so perhaps we had better leave the cities to be described by a more facile pen than mine. Sufficient to say that I shall live for the time when I can visit its shores again and renew all too short friendships which I made there.

There is little doubt that the bird life of Australia is fast decreasing. A great many agencies are at work and combined together they make an opposing force which it is impossible for the avifauna to withstand. Haphazard shooting with pea-rifles by youths on sheep and cattle ranches is a great factor in the diminution of the bird life. These "larrikins" as they are called in Australia go out armed with a pea-rifle or small shot-gun and shoot everything on sight. I was told of youths who go out in the district where the very rare Orange-bellied Grass Parrakeets live and shoot these birds and just leave them lying on the ground. I met some individuals in South Australia who had

been out to shoot Duck, in the close season by the way, and had failed to get any—"so we just shot some 'Major Mitchell's'" (Leadbeater's Cockatoos). I asked why. "Well, we had to shoot something and they make a rotten noise anyway!" . . . That is the spirit everywhere in the Australian bush. Kill it because it's alive. Of the disgusting kangaroo hunts, when these wretched animals are chased down at night by motors and when exhausted are held down by dogs released from the cars and bludgeoned to death by the "sportsmen" I can still hardly believe that it was Britishers who stooped to such utter brutality. A wild bird or animal is, to most of the people in the back blocks, just something to be killed.

Then there are the Italian settlers who are now being allowed in owing to the Catholic bias of the chief members of the Government. These people, as in their own country, kill every small bird for food, and in the districts where they are settled it is almost impossible to see any kind of bird.

There are also bush fires. There are very few parts of the indigenous bush or forest that have not seen the fire through it at some time or other during the "white" settlement of the country. Every month vast areas of forest land are burnt, sometimes inadvertently, often deliberately. These fires destroy a great number of nesting and also ground birds as well as destroying the food of the birds in the way of insects or fruit or seeds. Another important factor in the diminution of bird life is erosion, which is only in its initial stages yet but in a few more years will be a very serious problem in Australia. Owing to over-grazing by sheep and the senseless cutting down and burning of the scrub, vast areas are eroding and turning into barren wastes; enormous shallow lagoons, once the home of teeming millions of waterfowl, now look like miniature Saharas. As the vegetation is eaten down by the sheep, the soil is left uncovered and is thus unable to retain its moisture; consequently it dries up, winds whip the baked soil into dust storms, which in time choke up and destroy the remaining vegetation. In this way grasses, shrubs, and trees are prevented from re-seeding themselves. Even in places where the vegetation does manage to re-seed it is quickly eaten off by the sheep. It is tragic to see vast areas of dying vegetation slowly turning to what in another generation will be utter

desert. All this, of course, means death to the various birds, as their food supply is now cut off.

Many hitherto scarce Parrakeets and Finches now appear to be much more plentiful on the bird market and people who do not know the cause are apt to think that these species are now increasing. The truth is that these birds are being forced out of their hitherto remote habitats by erosion and are trying to seek pastures new and thus coming nearer to civilization. Also owing to the extension of travel facilities to the remote parts the habitats of the rarer birds are being discovered, and as soon as this becomes known the trappers hurry to the spot and are not content until most of the birds have been trapped. This is especially so in the case of Turquoise Parrakeet and the Painted Finch.

The introduced fox is playing havoc with the ground birds such as the Pigeons, Lyrebirds, Mallee Fowl, Brush Turkeys, Bustards, etc. The fox has no enemies so increases unchecked and I suppose in the end will exterminate most of the larger ground birds.

Another serious factor, and one which could be controlled, is poison in various forms. When rabbits were so very plentiful as to become a menace the "Poison Cart" was employed. This laid poison (strychnine mixed with bran) in furrows on the land and a great deal of this was eaten by birds especially Parrots.

A good many sheep-grazers poison the water in the troughs about the wells to kill the foxes and dingoes which come to drink, but in the meantime countless thousands of birds are destroyed, as this is often the only water for miles and most birds come to these troughs to drink twice a day. One person I met stated that he recently saw and counted over five thousand various Parrots, including many Lead-beater's Cockatoos, at one drinking place which had been poisoned.

I was told of fruit-growers who sprayed their fruit trees with poison to kill the Lorikeets and in one large orchard four dray loads of Musky Lorikeets were carted away. Yet I was refused permission by the authorities to take away one single pair of these birds.

Many thousands of Gouldian and other Finches are exported each year from the Northern Territories, and it is probable that the species will not be able to stand this continual drain on their numerical strength for many more years.

In the face of all these things it is impossible for the bird life of Australia, as an entirety, to survive. At least a high percentage of the most interesting and unique birds, like those of our own country where most of the interesting avifauna has long disappeared, will in the course of time vanish, and Australia will be reduced to certain birds like the Crow-Shrikes (Magpies), Kookaburras (Giant Kingfishers), Magpie Larks, Starlings, Mynahs, etc., and such common birds which have been able to adapt themselves to the altered conditions.

It would be presumptuous to make all these deductions from my own observations, but I talked with many eminent ornithologists and bird protectionists and from them as well as from my own limited observations, I gleaned the foregoing.

Whilst appreciating every measure which is for the protection and the preservation of the bird life, and also agreeing that there should rightly be restrictions against the wholesale export of Australian birds, I came up against some extremely galling and utterly ludicrous restrictions. The most ridiculous part of the whole business was when I was refused permission to take away with me a single pair of Ducks, yet had I so wished I could have purchased a gun licence for 5s. and have shot twelve Ducks per day for four and a half months, thus making a total of over 1,600 Duck which I could have officially slaughtered. When I mentioned this fact I was practically told to mind my own business. Barnard's Parrakeets were being shot in hundreds in the district where I had been staying, but I was refused permission to take away one pair. When I mentioned the matter of the shooting of the Parrakeets to the official I was told it was quite legal, and that "an Englishman's home was his castle". Quite what that had to do with it I don't know, but when I further argued it was again intimated that I should mind my own business.

I naturally hoped whilst in Australia to be able to collect a few choice Parrakeets for my own aviaries in England. My first application, for a very modest number of protected species, was rather rudely rebuffed by the authorities, who only allowed me to take away ten of the very common Parrakeets which were unprotected. In this they were powerless to prevent me, but they gave me the impression that this was a great favour on their part. I was asked in the presence

of the Minister concerned what I did with any young Parrakeets which I bred. I said I sometimes exchanged them for fresh blood ; upon this I was informed that I was therefore a dealer !

The official attitude regarding the export of birds from Australia is almost incomprehensible. Foreigners of any nationality other than British are more or less received with open arms so long as they bring with them a letter from any kind of fun-fair, menagerie, or similar trading concern which likes to call itself a " Zoo ", and they are then allowed to take away, not hundreds, but thousands of Australia's choicest birds. Most of these birds, though one cannot prove it, are for sale in the respective countries to which they go. Unofficially the collectors admit that the birds will be sold when they arrive in their own country.

During the short time I was in Australia three such large collections left bound for foreign countries. It was rather galling for a Britisher, an aviculturist like myself with decent aviaries, wanting a few pairs of birds for legitimate breeding purposes, being refused a single pair of protected birds, yet seeing hundreds of them leaving for sale in foreign countries ; my only method of getting these birds legitimately being to buy them, when I arrived home, from the foreign countries where they were imported ! These things possibly appear sense to the official mind but they certainly don't to the lay mind.

However, these things, galling as they appeared to be at the time, were only pinpricks and were compensated for by the kindness and hospitality I met with almost everywhere I went.

I suppose all of us deep down in our hearts have some longing or desire ; maybe to have that little dream house all of our own . . . to win a colossal sweepstake so that we can live a life of crowded fullness . . . to meet that friend who understands and loves us in spite of our failings . . . or to find that far away land where our dreams come true. My secret longing was to find in the heart of a vast forest a little wooden house that was part of the forest itself and where I could feel that the trees, the birds, and myself were all just part of the scheme of things—where the only sounds were the song of the birds, and the sighing of the wind in the tree-tops, and where one could see ranges and ranges of vast blue forest-covered mountains on whose tops the white clouds

rested and which turned to pink in the setting sun—where all was peace and quietness and where one could forget the sordid life of the cities. How seldom those dreams come true. Mine did. It was only a fleeting vision, a few short weeks of peace and quietness, of vast deep green forests with trees so huge that they seemed to pierce the very clouds themselves, of the songs of many birds and the soothing sound of the sighing wind in the tree-tops, and the house that was part of the forest itself. The recollection of those Elysian realms will always be fresh in the storehouse of memory and I shall live for the days when I can return. It was in the home of the Lyrebirds in the great green forests on the mountains of the Great Divide in the heart of Victoria that I found the land of my heart's desire. This spectacular and unique bird is restricted to the dense mountain forests which cover the ranges of mountains in the south-east of Australia, and it was for the purpose of seeing this bird that I made my home for a short time at the remote house set amid the virgin forests on the mountains of the Great Divide. At first I explored the lower gullies where dense masses of tree-ferns canopied the trickling mountain streams, but although I saw the semblance of one bird, they were not to be found in these districts. I made my way to the top of the ranges and there, in a setting of such awe-inspiring grandeur as almost held one breathless, I found my quarry. I had never liked the inevitable "blue gums" which one sees in almost every tropical and sub-tropical country—poor ragged things with scaling bark, lining dusty roads in some squalid African town . . . planted as wind brakes on the veldt . . . on the pampas in South America . . . along dusty roads in Algeria or around any ramshackle corrugated-iron hut where no other trees would grow—but in their proper setting they assumed a majesty unknown outside their native land. Here these giant trees towered up to between two and three hundred feet high with their tops literally in the clouds. Beneath these forest giants, living in the dense and often impenetrable undergrowth, I found the Lyrebird. He is as elusive as a phantom. One finds his scratchings everywhere, for the Lyrebird gets his living by scratching in the forest debris with his strong feet and thus procuring an abundance of small crustacea and grubs. Everywhere in the area where the birds live one sees evidence of their work, but oh ! how seldom does one ever get but

the most fleeting a glimpse of the bird itself. A flash of dark brown and he is gone.

The first time I went on my quest to find the bird I had walked many miles up the mountain sides and was resting on a log by the side of the track in the dense forest, when suddenly, from quite near at hand, I heard a burst of melody which I instantly knew must come from a Lyrebird. The voice was of such depth, power, and richness that I was held spellbound. First there was a song like that of a Thrush, but the notes were far richer and of an amazing quality. Then followed the songs of a dozen other birds, and being yet unacquainted with most of the Australian bird songs I failed to recognize some of them, but there was the creaking call of the Gang-gang, the " whip " of the Coach-whip Bird, the " laugh " of the Kookaburra, the rich notes of the Yellow Robin and many others, for the Lyrebird is the greatest of all bird mimics and these songs, added to his own repertoire of wonderful melody, make this bird's song unique. I looked round for the bird but he was invisible, so I moved a little towards the sound but in a second there was a movement, a flash of brown and the songster had gone. He had been giving his concert on a fallen log some yards away.

Later on I found the dancing mounds. These are in a clearing and are heaps of bare earth about 2 feet high and perhaps 5 to 6 feet across ; these the bird scratches up with his powerful feet and on them the marvellous tail is displayed. The bird bends forward throwing the widely spread tail over its head so that from the front only the underside of the huge fan-like tail is seen completely hiding the body. The upper side of the tail is dark brown and no doubt this is very necessary from a protective point of view, but the underside is a silvery grey. The wonderful lyre-like outer tail feathers, which are marked with rich chestnut and have transparent patches on them, are held out sideways like the outer supports of a fan, while the fine aigrette-like inner feathers are quivered and give the impression of a lace-like silvery fan. While the tail is held in this position the bird dances and also indulges in a torrent of song. I never saw the actual display as it was not the time for it, but I did see many photos of it and it is far more spectacular than any display of a Bird of Paradise.

The extraordinary thing about this bird is that it nests in the mid-winter, which in the mountain ranges is usually quite severe, sharp frosts and deep snow are not of unusual occurrence. The birds then leave the higher ranges and come down to the densely wooded gullies ; but here it is still very cold, even in mid-summer we used to have fires in the evenings. The nest is a huge affair, domed, with the entrance at one side. It is composed of fine roots and dead leaves, and is large enough inside for a dog the size of a small fox terrier to sleep in. The nests I saw were empty, as the birds had gone higher up the ranges, but they use the same nest when not disturbed year after year. Only one egg is laid and the incubation lasts for six weeks. Although the male neither helps in building the nest nor in feeding the young he is usually in the vicinity of the nest. The young are supposed to keep with the parents for three or four years, after that the eldest is driven off to fend for itself. Each pair of birds have their own territory, but they are said to pay visits to neighbouring couples.

The birds were quite plentiful in Big Tree Gully, so called because of a giant *Eucalyptus regnans*, nearly 300 feet high and over 60 feet in circumference, an ideal spot for the birds, where the dense forest covered the steeply sloping ground and tree ferns and other forest undergrowth kept the place in perpetual twilight. The mould was deep, rich, and damp, which is very necessary for the food supply of the bird. Tiny streams trickled in all directions, often lost beneath the thick humus of untold centuries. In such spots only can the Lyre-bird exist, for it is only here that it can obtain its food, which mainly consists of a small crustacean which lives just below the surface of the mould. Almost everywhere one finds evidences of the birds' scratchings, often they go quite deeply into the humus ; also they dig into the rotten tree trunks ; one also finds numerous feathers about. But in this part of its range seldom does one ever get but the merest glimpse of this elusive creature. After perhaps an hour or more of watching, we would hear one treading its way through the forest, but fifty yards or more away this wary creature invariably caught sight of us and in a second made off. Sometimes we managed to get quite close up to a bird which was singing in a dense clump of undergrowth ; I must have been within three yards of one bird, but he must have seen me before I saw him,

for his song suddenly stopped and I heard him slip quietly into the undergrowth.

For a long time I once listened to a male bird exercising his vocal talents ; he was singing his own song but it seemed to remind me of some other song. I tried for a long time to remember, then it suddenly dawned on me—it was the soft, sweet, pleasing chortle of another Australian bird, but from a district which was the very antithesis from that in which I was in, the Queen Alexandra Parrakeet ; but the song was much richer and deeper. I have never heard the “ song ” of this Parrakeet mentioned because I suppose no one imagines a Parrakeet has a song, but this one has. I have a male bird which will sit with his head in a corner and sing for often half an hour at a time, and quite a pleasant song it is.

To get back to the Lyrebird, the future of this bird is quite bright, for perhaps no bird in the world is more rigidly protected than this one. No one (with rare exceptions) outside a skin collector would dream of killing one, and even a collector would have to have a great deal of moral courage to do such a thing, for I'm sure that if he were found out (in Victoria at least) he would be very severely dealt with.

An odd egg collector may upon rare occasions take an egg, which is really a serious thing as the bird only lays one egg and that not every year. It is illegal to own a Lyrebird's egg or feathers in Australia.

No Zoos in Australia are allowed to keep these birds, and there is as much chance of anyone getting permission to export one as there would be for him to ask the British Government for the loan of the Crown Jewels, unless the applicant was a foreigner.

There was a sinister rumour that at a certain holiday guest house in the Sherbrook Forest where these birds are common they were served up at times under the *nom de plume* of “ Pheasant ” ; inquiries were made and since then “ Pheasant ” has not appeared again on the menu. I think if it were proved to be true the proprietor would be nearly lynched.

In pre-settlement days the birds had few or no enemies, as evinced by its slow reproductive activities, but now its chief enemy is the European fox which has spread into the districts where the bird is found. It is said that owing to this the bird is now building its nest higher up

from the ground ; previously the nest was only 3 or 4 feet from the ground, and all those I saw were not more than this distance from the floor of the forest and readily accessible to a fox. Dingoes in the remote districts also take a few, but these animals are rare now in the forested areas. The forest fires no doubt take a toll of the young and sitting birds.

We came upon one tragedy, a large quantity of Lyrebird's feathers, including some of the beautiful aigrette-like tail feathers, where obviously the bird had been sprung upon by some carnivorous mammal and taken away to be eaten, no doubt a fox.

Sitting one day in a hollow forest tree sheltering from a torrential rain storm, I heard a Lyrebird calling and scratching only a few yards away, but try as I might I was unable to see him. Eventually I was able to creep up within a yard or two, but was still unable to see the bird for the intervening undergrowth ; then there was a sudden alarm note, a flash of silvery white, and I saw the underside of the tail of a male bird as he quickly disappeared in the dense vegetation. Many times in the forest on Mount Monda I saw but a momentary glimpse of a bird, and I came to the conclusion that it was the shyest and most elusive bird I'd ever tried to study in its native haunts. However, in the Sherbrook Forest near Melbourne my acquaintance with this bird, though of short duration, was much more intimate, for here this apparently elusive creature was comparatively tame. The undergrowth was not nearly so impenetrable as at Mount Monda. Soon after I arrived in the forest I heard the loud melodious calls of the birds and we crept in the direction of the sounds ; but it was rather difficult to know which sound to follow, for after being on the track of one for a few minutes this would suddenly stop and another would start in the opposite direction. Eventually we saw one in the distance and I crept slowly up to it. It turned out to be a young male, perhaps two years old, and also a hen bird. I crept closer and closer hardly daring to breathe, for I knew from previous experience how very wary these birds were . . . just a flash of brown and the bird is gone . . . each moment I expected the birds to disappear ; but no, they still stood their ground though they must have seen us long before we saw them. At last I was within about twenty yards of them, the hen moved away but the young male remained. I followed

up and at last got within 20 feet of him. That hour I watched him I shall never forget. I remember every minute of it. His scratching was totally unlike that of any other bird. He got great clawsful of forest debris and flung them aside, sometimes he clutched large boughs and fallen tree-fern trunks and dragged them away. He used his feet in the same manner as one would use a hand. My companion told me that the way these birds tear huge decaying trunks of the fallen forest trees to pieces with their feet is nothing short of incredible. Quite large holes are made that one would think were the work of rabbits. The Lyrebird scratches with one foot at once and it does not scratch in the accepted sense, but rather rakes over the mould, and any large obstructions are firmly grasped and flung aside. The main food and what I actually saw the birds eating, was a small crustacean of a brown colour which greatly resembled a sand-hopper and which lives in countless thousands just below the top of the loose forest soil. I also noticed this particular bird eating an odd worm at times. The sight of sights was when five birds came into view at once and indulged in a kind of wild ecstatic dance, the kind of thing Pheasants occasionally do in moments of uncontrolled exuberance. Before the male gets his adult tail the feathers resemble a bunch of long ribbon-like plumes curving towards the ground and held in an ill-assorted bunch. The outer tail feathers which eventually give place to the Lyre-like feathers, are noticeably patterned underneath. When the bird is digging or scratching the tail is held at a high angle above the ground. The throat is coloured like the breast of an English Robin and the eye is large and of a deep liquid brown. The bird when not singing utters a series of loud calls which sounds rather like the word "Chop" many times slowly repeated.

The Lyrebird is about the size of a large Pheasant, but much slimmer in build and is of a general rich earthy brown. The magnificent tail of the fully adult male, which superficially resembles a lyre, is too complicated to describe fully and must be seen to be appreciated, there is certainly nothing else like it in Nature. Stuffed birds in museums give a very erroneous idea of what the living bird is like.

It is generally agreed that the Lyrebird is not related to another type of bird and that it stands out on its own with habits quite unique from any other feathered form.

There is a little book published in Australia, called *The Lore of the Lyrebird*, and although it is written in a style of highly coloured and sentimental journalism it gives quite a fair idea of the habits of the Lyrebird, contains some excellent photographs, and is well worth reading. It is the story of how one of these elusive birds made friends with a woman who lived in a lonely cottage by a forest, and how it used to come every day to display and sing for her on her veranda.

(To be continued.)

THE PERCHING BIRDS OF CANADA

By JAMES CASSIDY

The Order of Passeriformes or Perching Birds is to-day the largest and quite the most important division of modern birds and heads the classification by Systematists.

Of course, the perching birds have many characteristics in common with birds that are not perchers but they have also a great number of characteristics unshared by other orders.

One of the most remarkable is their capacity for song. The larynx is highly developed as a singing organ with complicated muscular control.

The feet are particularly well adapted for perching. They are not webbed. The hind toe is nearly as long as the middle one. The bill is not soft at the base but hard and horny and the nostril tubes are free from communication with each other.

It is desirable to state that the Order Passeriformes has the subdivision into the songless perchers (Tyranni) and the song-birds (Passeres). Here we shall interest ourselves with a few of the songsters. Both sub-orders are well-represented in Canada.

One of the best beloved birds of the plains of Canada is the Western Meadow Lark. Its brown and yellow, jet black and white are easy marks of distinction. West of the Great Lakes in Canada this little bird, about the size of a large Robin, is not to be mistaken for any other species, not even for the Eastern Meadow Lark, but this latter bird is seldom to be found west of the Great Lakes. Its throat, which is lemon-coloured, shows off the black necklace to great advantage.

Mr. A. P. Taverner, writing in his inimitable manner of this bird, says regarding its voice : " One of its most characteristic calls has been well syllabized by a Western ornithologist as *King-chigle-a-bunk* in contrast with the Eastern Meadow Lark which says ' Toodle-de-you '." It is an extremely valuable bird to the farmer. The crop analysis shows that its food consists of 75 per cent insects, 12 per cent weed-seeds, and 13 per cent grain. The grain is taken at the season of the year when insects are very scarce.

The little creature is not only beautiful and economically useful but it is famous, and deservedly, for its lovely voice which rings " rich and full and true " over the open fields and prairies. It is impossible to describe the voice. One distinctive effect may be mentioned, its ventriloquistic quality. The song sounds loud and close to the ear ; one looks up at a nearby fence, but no bird is to be seen. The trilling continues, and the volume of sound increases, but the songster is a hundred yards or more away ! Perhaps this beautiful voice is the most welcome as the herald of spring, which comes when the trade-winds have melted the dreary waste of snow encircling the ranch, and the Western plainsman hears the notes that announce so unmistakably the coming of spring.

We pass on with the song of the Western Meadow Lark yet ringing out, to a brief consideration of the Yellow-headed and Red-winged Blackbirds. The Yellow-headed is the larger of the two. The two birds, however, have much in common.

Not by any means a quiet spot is the nesting place of a colony. Noise and constant coming and going, excursions and incursions and other alarms, croaking, gurgling of rough harsh voices, with intermittent outbreak of strenuous and raucous objections, the flashing and fluttering of brilliant colours and of black wings, both species taking a part in the activities, distinguish the nesting marshes of the colonies.

Here is a spirited account of a Blackbird roost just before sunset given by Mr. A. P. Taverner. " The birds come in from every direction talking and croaking loudly, in vast black clouds, looking on the horizon like wisps of smoke blowing before the wind. They pitch into a bed of reeds already occupied by earlier arrivals, until each

stalk seems strung with big black beads. At the onslaught of the incoming contingent birds are dislodged right and left, there is a babel of protesting voices and a fluttering of many wings that whirr loudly in the still air as the surface of the green marsh boils with black forms seeking new resting-places. The confusion gradually subsides until the next arriving flock starts the hubbub over again. Thus it goes on as the sun sinks, until all are in and then the evening wind chases waves over the soft green surface of the reed-beds without revealing a hint of the hordes of black bodies beneath, that are resting through the stillness of the night."

The Yellow-headed and the Red-headed Blackbirds are both ground-feeders. The greater portion of their food consists of insects harmful to vegetation and weed-seeds. The rest is *waste* grain. Farmers have much for which to thank these birds.

By no stretch of imagination can their song be said to be melodious. It has been described in such harsh utterances as "Kluck-Kluck-Klee-Klee-Klo-Klee-Klu-Klel-Kriz Krizz z z z z z z z z z z eeee" on the part of the Yellow-headed bird, and "O-Ke-Lee O-Ke-reeee" on that of the Red-headed bird. These notes are characteristic as a song of the marshes.

We now spend a few minutes with the family Paridæ—Titmice—the bright happy little Chickadees. Three subspecies are recognized in Canada. The Eastern Chickadee, the Long-tailed Chickadee, and the Oregon Chickadee. No matter what the weather, be it blustery or wet or raw, this cheerful little bird keeps up a "Chickadeeing". It is chronicled that ornithologists know nothing of a "discouraged Chickadee". When winter renders birds scarce, and human hopes seem sogging and fears in the ascendant, still one may hear the cheery call "Chica-Chica-dee-de" as one little feathered hope constitutes himself the leader of a party of other congenial spirits and, like "Pippa" of the famous poem, brings a better spirit and outlook as he passes with his cheerful notes. Warblers of other species gather to the rallying notes, contributing their parts to the fascinating, spontaneous, choral service. As winter withdraws the approach of spring is heralded by the Chickadees with a new song, two whistled notes, high and clear, the

first prolonged, the second two tones lower, which translated are "Spring's here".

The Chickadee works hard for its little living all the year round. With its small companions, the Nuthatch and the Creeper, they achieve much. Being of an inquisitive turn of mind the Chickadee and its friends examine minutely the crevices of trees where insects hide and hibernate, and in company with the allied species (the Nuthatch and Creeper) the total of insect eggs taken must be very considerable. The intense cold sharpens the birds' appetites and as their food is very tiny everything points to their incalculable use to the farmer and agriculturist. An examination of the Chickadee's food shows 68 per cent insect, and 32 per cent vegetable. An analysis reveals insect eggs, larvæ, chrysalids, and small insects, small weed-seeds, and wild fruit.

The bright-spirited and lively Chickadee is easily persuaded to frequent the home grounds in winter and soon yields to coaxing to alight on the finger and feed from the hand. Its gentle, inquisitive nature assists its approach.

Chickadees nest in old stumps, holes of trees, and other well-protected places. They line them with grasses, feathers, plant-down, moss, felted-fur, and other soft materials.

AVIARY MANAGEMENT

By RICHARD JAMES

Whatever avicultural achievements may be attributed to Patricia R. Cholmeley, the fancier mentioned must have experienced a most enviable thrill with regard to the breeding and almost successful rearing of the Black-crested Finch. A year ago this unique and amiable bird was unknown to many of us. The breeding pair mentioned in the article published in the October issue went to nest in an aviary containing a mixed collection of little birds. I wonder if many fanciers, like myself, will wonder what species the mixed collection included. "To what extent can the species be mixed?" There is a question that has not been sufficiently emphasized. The question is the theme of this article. Many aviculturalists begin as sentimentalists, thinking

birds are angels, and wish to create a heaven for them in the form of an aviary. After a series of shocks such fanciers either give up or become serious-minded and useful students.

I contend that no man or woman should be allowed to have a voice in the making of laws relating to bird protection or bird preservation until that person has made a study of their peculiarities, both in freedom and captivity. No useful purpose can be served in that particular direction by keeping isolated birds or isolated breeding pairs. An aviary can be a heaven for birds, or it can also be the worst possible hell. Progress in the form of the builder has restricted the breeding area for birds, and the congestion must make life more simple for the natural enemies of birds. The weasel shall not live by mice alone, also the squirrel does not eat only nuts. The Great Tit will eat the brains out of the Yellow Bunting, the Bullfinch, and others. The Tit will attack such birds before they are self-supporting ; the Blue Tit is also an offender, this sweet creature will raid a nest of small birds when they are ten days old. Not one chick is ever spared once a Tit has dated a nest. The Owl makes a raid just before dark, four journeys in eight or ten minutes and four fresh-killed young, feathered, Black-birds are in the larder. Every Cuckoo reared means that four or five peaceful birds have been sacrificed. Consider the deleterious habits of the Jay, Jackdaw, Shrike, and Hawk. Then we may appreciate the importance of the question : " To what extent can the species be safely mixed ? " Also we can admit an aviary can be a bird's heaven if we take our hobby seriously. If we consider to what extent the general public can compromise in their attitude towards bird protection, then we are likely to find it difficult to dissociate sentimentality from humbug. To any reader who may consider these remarks exaggerated or too trivial for publication I would like to state that any remarks are the direct result of my own observations, and can hardly be trivial since I have from time to time received letters from fellow-fanciers asking questions relating to all the subjects and species mentioned. Now to revert to the question regarding a mixed collection. So many species may seem safe with each other until the birds come into breeding condition. The fact that an aviary is not intended as a breeding aviary is of no help. Each healthy bird must come into

condition at some time or other—the birds then act or react as instinct dictates. And here are some of the writer's impressions.

All the Whydahs are egg-eaters, the Pintailed Whydah is a killer, likely to scalp any other inmate from a Waxbill to a Java Sparrow. The Gouldian Finch is peaceful and tolerant to all smaller birds, but only one pair can be kept in an aviary in the breeding season. A breeding pair of Gouldians may object to the company of a Goldfinch in the breeding season, the Goldfinch being the only possible exception I know of. The Avadavat will agree with anything in, or out of the breeding season, but an unmated bird may cause trouble in the breeding season. The Orange Cheek and the Grey Waxbill will agree in flocks at all times, though unlikely to make a sincere attempt to rear young.

Golden-breasted Waxbills will agree in quantities and go to nest without undue quarrelling. The Cordon Bleu will enjoy the company of others of the same kind, but when in breeding condition they object to another pair in the same aviary ; strangely enough they do not object to a crowd of others. They are never aggressive to birds less colourful than themselves in the breeding season, but likely to be at war with such birds as Gouldians and Goldfinches. This war will last until the breeding urge leaves the birds. Not more than one pair of Lavender Finches can be kept together at any time, and only a true pair can ever be kept, they are then not always to be trusted with other birds. The Tits are not safe with anything at any time. The Zebra Finch will upset the nesting arrangements of any breeding pair from a Waxbill to a Canary. If the aviary is large enough, and not too much traffic, then the following may successfully rear young, even though two or more pairs are in the same aviary : Twites, Greenfinches, Goldfinches, and Linnets. The writer can never at any time trust two adult Bullfinch cocks together. Chaffinches are amiable to each other and all other species, except when in breeding condition, and at such times they only object to their own kind. The Thrush family will tolerate smaller birds only until they have young of their own, then they are likely to kill Finch-like birds and also eat Finch chicks. The Skylark is likely to be most spiteful to other birds when in breeding trim. Diamond Finches and Grass Finches may be trusted with other breeding pairs if the aviary is of fair size,

but only one pair of each species ; the same remarks apply to the Firefinch, Cuba Finch, and the Singing Finch—both green and grey. The Saffron Finch is likely to become aggressive to other breeding pairs when he is himself in breeding condition. The Song Sparrow is likely to scalp any other bird in or out of the breeding season. Most of the foreign birds mentioned above will, if acquired in good condition early in July, become acclimatized and live for many years in an out-door aviary, and enjoy good health without artificial heat. Wagtails are at all times aggressive and often murderous. Siskins and Redpolls are at all times amiable, the latter mentioned far too amiable for comfort. Most small birds that will breed in captivity are more prolific than are the same species in the wild state, and such birds will come into full colour earlier than the average wild-bred birds. The only exceptions are the Greenfinch and the Chaffinch. The Buntings are not popular captive breeders. A pair of Goldfinches will produce up to seventeen healthy youngsters in one season, against nine in the wild state. I have never known a pair of Linnets rear more than three youngsters per round in the wild state, and never less than four youngsters per nest in captivity.

BREEDING NOTES

By FRANCES E. MATTHEWS

Owing to adverse weather conditions, it was late this year before my birds were installed in our small garden aviaries. Though they took some time to decide about breeding, hope ran high when good starts were made by most of them. Now at the end of the season "So near, and yet so far" describes many of the results to date.

A pair of Shamas seemed very pleased with their abode, the hen choosing a nestbox under cover, where she brooded five eggs in an exemplary manner. Sad to relate, these were infertile. In her second nest two eggs were fertile, but from some cause these were chilled just when due to hatch. In the third nest I saw one bird of some days old, and I believe another egg was fertile. Then to my dismay these were thrown out, and the hen gave up sitting. All through the hen fed well on insectivorous food. She flew to me every night and morning as

soon as I appeared and took her mealworms on the wing, returning to her nest shortly afterwards. This third nest was outdoors at the end of the flight. The cock (though the pair agreed well) held aloof from his domestic duty—to feed the young ones. I never saw him enter the nest. I wonder whether he, or the hen, were to blame for the failures? I fancy somehow he was. The hen was entirely satisfactory until the end. Have any of my readers had a similar experience? In this district, owing to the low flying of 'planes overhead birds are liable to be disturbed if not steady sitters.

In a small adjacent flight a steady pair of Dufresnes prepared a marvellous nest inside a covered box. The hen sat well, the cock sharing duty. These little birds had evidently great hopes, but no young birds appeared; it was a long time before they gave up. Their second effort yielded no results. Their nest was composed, I should think, of everything they could find. The cock never wearied of adding to it, until the box became quite an Early Victorian abode, feathers, coloured wools, sacking fibre, forming an enveloping cloud to the tiny eggs almost concealed. The cock was on the watch; if I put another strand of wool in a wee basket on the door of the flight, before my back was turned it had been added to the clutter surrounding his wee mate. These birds certainly deserved a family!

A pair of Violet Ears, put out during the warmer spell, quickly started nesting. During last autumn and winter they nested indoors several times. The hen has been a very prolific layer, always starting well, the cock also brooding the eggs. From some cause they failed at the end to bring it off, though the eggs in several instances were fertile. My efforts to employ Bengalese as foster parents fell through. I feel they will do better themselves sometime as they are such steady birds. When this last damp weather started, reluctantly, I brought them indoors. The change in no wise upset the hen; she started feeding at once, and then laid an egg in her usual rush nest fixed in their cage. I find that most birds prefer these closely plaited rush nests, resting in the fork of a branch and fixed high up in their dwelling, to ordinary boxes. I make a good number of them. Most breeders, I think, love Violet Ears, and with reason. My two are very tame, especially at this season. You can go close up and converse with them; they chirp back in reply. All new kinds of food are sampled at once. A millet spray

stem, dipped in honey and fixed somewhere, is a joy to them. If you ask the cock to sing he tries to start, and is especially good when the sun comes out. His song is like that of the Reed Bunting; some notes are comparable to those of the Lark when receding from sight. The hen can sing a bit, too, on occasion.

Having acquired a cock Pintail Nonpareil without a mate, I placed with him a good Blue-faced Parrot Finch. She has laid a good many eggs, some in a nestbox, but does not suggest brooding them—probably she deems it might be waste of time! Both birds are fit, and they are also excellent feeders.

A pair of *Ruficaudas* promised well, the hen choosing a nest, though apparently she never produced any eggs. She was found dead after some weeks when the nest was examined.

A pair of *Emblema Picta* have been outdoors all the summer. They have just come out of a moult; possibly owing to this no progress has been made in house hunting.

A steady pair of Longtail Grassfinches have nested several times, hatching every egg. They are feeding a family of five at the moment still in their nestbox.

My Gouldians were late in going to nest—even the well-seasoned pairs. Two pairs imported this year have now got over the inevitable moult. They are in fine health and starting nests. A seasoned pair are jealously nursing a good many eggs in one of the cone-shaped rush nests. The results are yet unknown.

I attribute success with these birds to careful feeding of the right kind, and plenty of seeding grass.

I have followed the advice in all respects given in *Practical Hints on the Keeping and Breeding of Gouldian Finches*, by P. W. Teague. I believe it is due to this that the colour of the seasoned birds is so vivid, more so than that of the new arrivals. These red heads are truly red, whereas the red head cock of the former might be called a "Crimson head"; this colour is so much richer, and the other colours purer. I should like to hear if others have found this to be so? In an outdoor aviary, not well placed, Bengalese have flourished. By them the soaked seed is greatly appreciated; it has produced strong young birds. This is noticeable with some pure whites, who fledged rapidly and are good on the wing.

REVIEWS

A HISTORY OF SUSSEX BIRDS. By JOHN WALPOLE-BOND. 3 vols. H. F. and G. Witherby, Ltd., 326 High Holborn, W.C. 1. Price £5 5s. net.

This imposing work deals very fully and carefully with all recorded bird residents and visitors to Sussex, amounting to nearly 450 species and subspecies ; some breeding regularly, others that used to do so ; occasional breeders and passage migrants, accidental visitors, and probable escapes from captivity. The evidence, written and hearsay, is carefully sifted for and against, and copious footnotes added. The author began to amass material for the work thirty years ago but as he says in his Introduction, no one man can pretend even with all the help obtainable to cope with the whole of a county completely, and for this reason no county book can be done really satisfactorily by one man, though most readers will agree that Mr. Walpole-Bond has come as near to the ideal as any one could hope. He writes very interestingly, no dry-as-dust chronicle, gives his reasons for or against the records quoted, and adds distribution through the county, nesting notes with number and colouring of the eggs and the kind of place where the nests are likely to be found.

The result is eminently readable and packed with information which will appeal to the general reader as much as to the ornithologist. The fifty-three coloured plates by Philip Rickman add much to the charm of the book.

Natives of Sussex may well be proud of their long list of records and it is hoped that further notices of occurrences with data will be sent to Mr. Walpole-Bond for inclusion in the next edition of his fine book.

E. F. C.

THE FLIGHT OF BIRDS. By C. HORTON-SMITH. H. F. and G. Witherby, Ltd., 326 High Holborn, London, W.C. 1. 7s. 6d. net.

The author modestly claims that this book is "intended to serve as an introduction" to his subject "rather than a comprehensive survey", but he contrives to impart a great deal of instruction while avoiding

technical discussion. Among other interesting information he explains how habitat affects flight, as instanced in the rise of the Pheasant which is almost vertical, "a necessary quality in a bird which lives in woods where the only way of escape may lie through a small opening in the vegetation immediately overhead", while the Partridge, living in open fields, escapes usually by horizontal flight. As a general rule, he points out, long pointed wings are typical of birds of open country and short rounded ones of dwellers in woods and hedgerows.

Many people have marvelled at the flight of birds, but the successful study and clearing up of its difficulties demands a technical knowledge both of zoology and aerodynamics, combined with opportunities for watching birds in open country. The latter are now supplemented by the beautiful film pictures showing the flight of different birds in slow motion and at normal pace. High speed cameras and telephotolenses also show permanent and detailed records of flight under varying emotions, such as fear, when pursued by an enemy, hunting, search for food as exemplified in the hovering of a Kestrel engaged in quartering a field for its prey, and especially love flights which range from simple flutterings to the elaborate tossing, somersaulting, and swooping of the Lapwing. There is also flock flight in formation, where each bird has its recognized place, as for example the V-shaped ordered flight of wild Geese.

The book is freely illustrated with plates and figures depicting types of flight, the positions of the wings when a bird is rising or alighting, the structure of feathers, and their insertion into the wing. There is also a useful glossary of technical terms and a good index.

E. F. C.

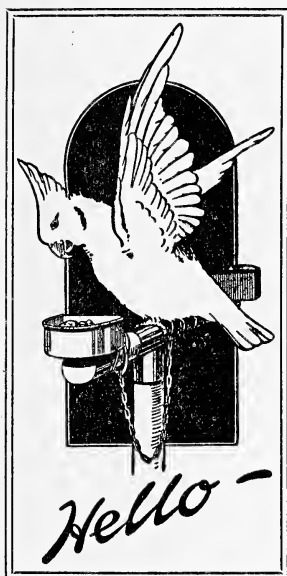
ERRATUM

BREEDING OF MITCHELL'S LORIKEET

In Dr. Derscheid's article in the October issue, on page 277, line 1, replace the words "in the United Kingdom" by the words "in the British Empire". It seems that Mr. W. C. Osman Hill's success in breeding the said species was achieved in Colombo, Ceylon, although no definite mention is made of the locality in the course of its account in the AVICULTURAL MAGAZINE, August, 1938.

J. M. DERSCHIED.

DUE to arrive on the 7th November next, a large shipment of Indian birds. These birds are being brought over by our own expert attendant and comprise the following :—



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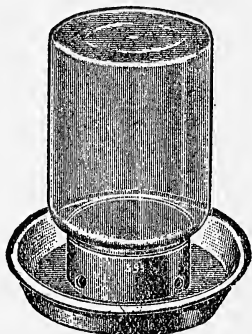
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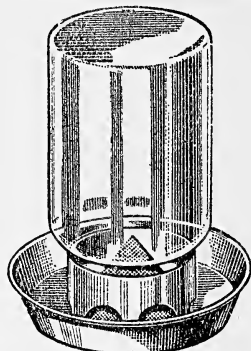
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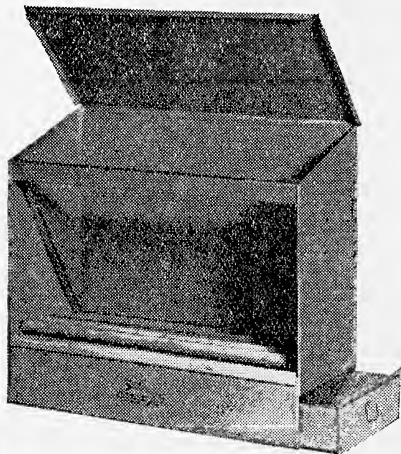
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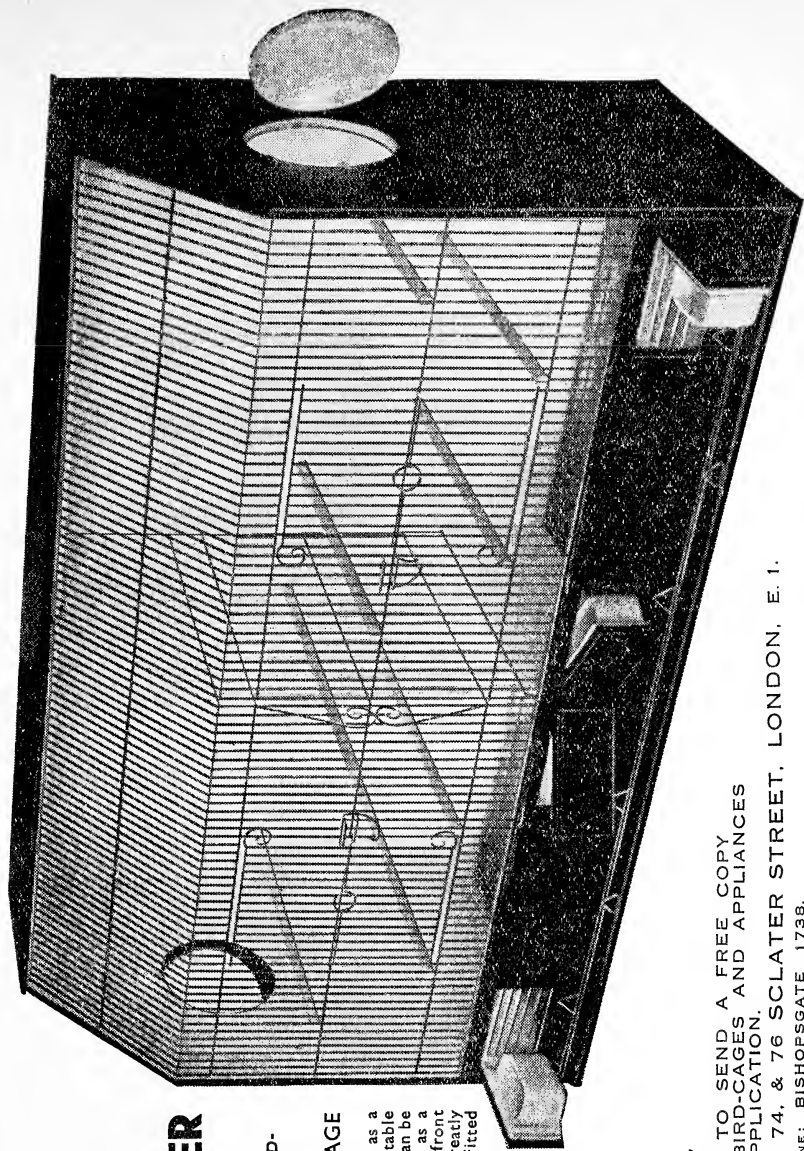
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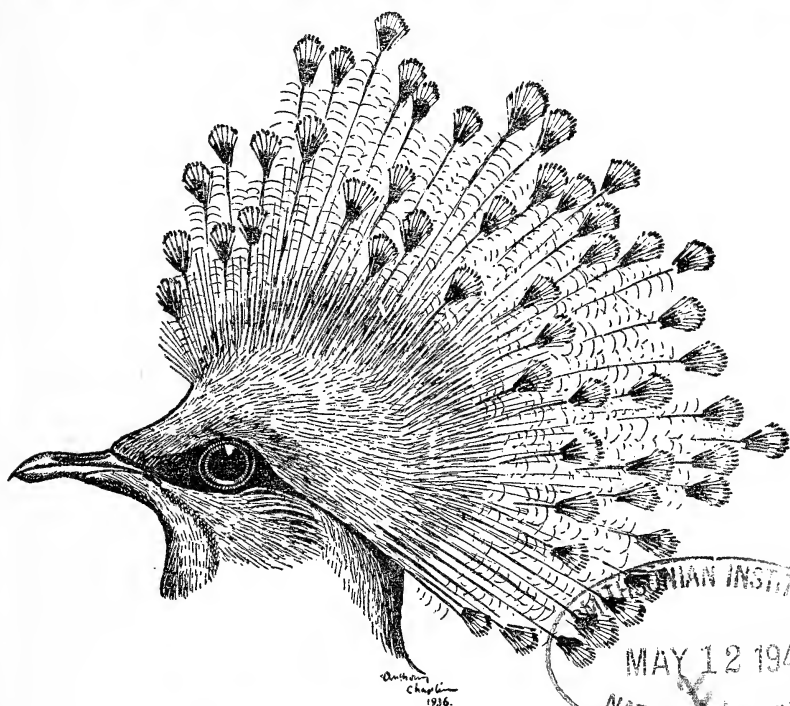


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THE AVICULTURAL MAGAZINE



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FOUNDED 1894

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Mikado Pheasant *Calophasis mikado*

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THE MIKADO PHEASANT

(*Calophasis mikado*)

This exceedingly beautiful Long-tailed Pheasant was introduced to Europe by Mr. Walter Goodfellow in 1912. He captured living specimens on Mount Arizan in Central Formosa and successfully brought them back to Europe. The first to reach England were housed in Mrs. Johnstone's aviaries, where they bred freely. Though the bird had not previously been seen, it was known to exist, because a collector in Formosa twenty years previously had observed two of its tail-feathers in the headdress of a savage.

The Mikado is essentially a mountain species. Mr. Goodfellow collected it on Mount Arizan "at any altitude above 6,000 feet, never lower". They feed chiefly on the leaves of a common plant also only found at these altitudes, and are very difficult to get on to grain, but once this is accomplished they live well and give little trouble. The egg is pale creamy white, smooth and glossy, the period of incubation twenty-eight days.

E. F. C.

BREEDING RESULTS AT FOXWARREN PARK, 1938

By ALFRED EZRA

BRONZE-WING PIGEON.—Four young hatched and successfully reared.

CRESTED BRONZE-WING PIGEON.—Eight young hatched and successfully reared.

SNOW PIGEON.—Two young hatched but not reared.

DWARF TURTLE DOVE.—Eleven hatched. Ten reared.

TRIANGULAR SPOTTED PIGEON.—Two young hatched and reared.

INDIAN GREEN-WINGED DOVE.—One hatched and reared.

NECKLACE DOVE.—Five hatched. Three reared.

BLACK THROATED CARDINAL.—One young hatched and reared.

WESTERN BLUE BIRD.—Eleven hatched and reared but several died after being separated from the parents.

WESTERN × EASTERN BLUE BIRD.—Three young hatched. One reared.

MOUNTAIN BLUE BIRD.—Nine hatched. Five reared. Two died when full grown through being fed on mealworms.

ROYAL × SUPERB STARLING.—One young hatched but died when almost full grown.

MADAGASCAR WEAVER.—Five hatched and four reared.

YELLOW SHOULDERED WEAVER.—Two young hatched and reared.

JACKSON'S THRUSH.—Four young hatched, but two reared.

ROYAL STARLING.—One young hatched which lived only one day.

SNOWY-HEADED ROBIN CHAT.—Two young hatched, but were thrown out of the nest when almost full grown.

PURPLE-HEADED GLOSSY STARLING.—One young hatched which disappeared when nine days old.

BLACKSMITH PLOVER.—Six young hatched and four reared. I may mention that this pair of birds started laying soon after Christmas, 1937, and laid about twenty-five eggs in all. Of course they were only allowed to incubate the last two clutches.

MOUNTAIN QUAIL.—Five hatched, but only one reared.

The following birds had eggs which were not hatched: Kookaburras, Yellow-billed Magpies, Eastern Blue Jays, Pekin Robins, Rothschild's Grackles, White-eared Bulbuls, Giant Wydahs, Mountain Witch Doves, White Mynahs, Shamas, Abyssinian Cliff Chat, Scarlet-backed Tanagers, Tair Pigeons, and Brush Bronze-wing Pigeons.

In my large animal enclosure I have had a very successful year's breeding. Over a hundred full-winged Mandarin and Carolinas were seen on the pond in addition to a good many other varieties of Ducks hatched under hens. The Fulvous Tree Ducks have been most prolific

and over one hundred young were reared. Six Ashy-headed Geese were fully reared, also four Bar-headed Geese, five African Sheldrake, nine Orinoco Geese, any number of Black-shouldered Peafowl, two splendid Stanley Cranes. The Chukor Partridges have done splendidly this year, and in my gardens near the house I have counted over fifty of them. They nearly all of them fly up to the top of the house and roost there. Jungle Fowl as usual have increased a lot, also the Silver Pheasants. Three very fine Black-necked Swans were reared.

PARRAKEET BREEDING RESULTS AT FOXWARREN PARK, 1938

By ALFRED EZRA

ALEXANDRINE PARRAKEETS

1st Pair.—Three eggs laid, and eaten by the birds five days later.

2nd Pair.—Four eggs laid, all fertile, but were spoilt by frost.

3rd Pair.—Three eggs laid and three strong and healthy young fully reared; all Green; parents were Blue-bred.

4th Pair.—Two eggs laid, one Lutino young reared; the other egg was infertile.

5th Pair.—Three eggs laid and two young hatched, but parents would not feed the young, which died.

6th Pair.—Two eggs laid and two young hatched out, but unfortunately they were killed by parents when almost a month old.

7th Pair.—Four eggs laid, all fertile, but spoilt by frost.

8th Pair.—Two eggs laid, both fertile, but spoilt by frost.

RING-NECKED PARRAKEETS—YELLOW BRED

1st Pair.—Parents, both Yellow birds, laid three eggs; all hatched out but two were found dead when twenty-two days old; one reared. All these young ones were Green.

2nd Pair.—Lutino female mated to Yellow-bred male. Two eggs laid; one Green young one hatched and reared.

3rd Pair.—Lutino female mated to Lutino-bred male. Four eggs laid, only two young ones hatched and reared. Both Lutinos.

4th Pair.—Lutino female mated to Lutino-bred male. Three eggs laid; all hatched out and young reared. All Lutinos and three of the best young ones ever reared here.

5th Pair.—Lutino female mated to Lutino-bred male. Three eggs laid, all hatched and reared. All Green.

6th Pair.—Lutino female mated to Lutino-bred male. Laid four eggs, all hatched and reared. Three Greens, one Lutino.

7th Pair.—In an aviary containing seven Lutino-bred birds—four males and three females—three eggs were laid and all hatched out. Two Green and one Lutino. Unfortunately the Lutino young one died when fifteen days old.

QUEEN ALEXANDRA PARRAKEETS

1st Pair.—Three eggs laid, two young ones hatched and reared.

2nd Pair.—Two eggs laid, two young ones hatched, one died when only one day old and the other one died when eight days old.

CRIMSON WINGS

One pair laid four eggs and hatched them all. Two young ones died when only one day old. The other two were reared.

BARRABANDS

One pair laid three eggs, all of which were hatched out. Two of the young died when seven days old and the third one was hand reared, as the parents gave up feeding.

MALABARS

One pair laid three eggs, all of which were hatched and reared.

LAYARDS

Four eggs laid, but all infertile. The hen will not take kindly to the male.

LEADBEATER'S COCKATOOS

A pair of these laid two eggs and hatched them both. One hatched a week after the other one and this bird died two days later. The other one was reared but is not a good bird at all.

The most interesting birds to nest were my pair of Guildings Amazon Parrots, which laid three eggs, but they were all infertile. As these are only young birds it is hoped that next year they will produce young. No birds this year suffered from egg-binding.

THE BIRDS OF THE ADELAIDE ZOOLOGICAL GARDENS

By NEOPHEMA

PART I: THE PARROT ORDER

The Adelaide Zoo has long been noted for its collection of the birds of this order, particularly the Australian representatives, of which fifty out of the fifty-nine known species were exhibited during the past year. We shall deal with the families in the usually accepted order.

(a) THE NESTORIDÆ

The only representative of this small but interesting family is the Kea (*Nestor notabilis*). Two males have been in the Zoo for a good many years, and two females were recently acquired.

(b) THE LORIDÆ

The only Lory exhibited during the year was an example of the common Black-capped (*Domicilla lory*). Of the Lorikeets there is a solitary Forsten's (*Trichoglossus forsteni*) and two Blue-faced (*T. hæmatodus*), one of which has laid. The common Blue Mountain or Swainson's (*T. moluccanus*) is always represented in the collection by a few examples, and has bred in the Gardens. The rarer Red-collared (*T. rubritorques*) is at present represented by four pairs in beautiful condition. The Scaly-breasted Lorikeet (*Eutelipsitta chlorolepidota*), formerly a common bird in captivity, is now represented by a single example, while a small flock of the attractive little Varied Lorikeet (*Psitteuteles versicolor*) has dwindled also to a single specimen. The Musk Lorikeet (*Glossopsitta concinna*) is hardy and represented

by several pairs at present, but the little Purple-crowned (*G. porphyrocephala*), though common in the streets and parks of Adelaide and at times in the trees in the Zoo itself, was only represented during the year by a single bird, and is always difficult to keep in good health. The Little Lorikeet (*G. pusilla*) is the only Australian species missing and it has never been exhibited.

(c) THE CACATUIDÆ

The black species are well represented though generally rarities in collections. The Great Black Cockatoo (*Probosciger aterrimus*) is well represented with six specimens in fine condition, and they are almost certainly of the island form and not the Australian sub-species. The Banksian Cockatoo (*Calyptrorhynchus banksi*) is represented by a pair, of which the male is one of the oldest aviary inhabitants of the Zoo. The female is of one of the small races and has laid eggs on several occasions. The Glossy Black Cockatoo (*C. lathamii*) is also represented, a pair having recently been acquired. It is probable that this species has never been exhibited in captivity before.

The Yellow-tailed Black Cockatoo (*C. funereus*) is rare in captivity. A pair have been exhibited for some considerable time, and a third has recently been acquired. The White-tailed Black Cockatoo (*C. daudini*) is not represented, but one fine example was a temporary inhabitant this year on its way from Perth to the United States. The Gang-gang Cockatoo (*Callocephalon fimbriatus*) is represented by an adult pair and two immature males, all in excellent condition and so far not given to their favourite vice of feather-plucking.

The commoner Australian Cockatoos, namely the Sulphur-crested (*Kakatoe galerita*), Leadbeater's (*K. leadbeateri*), Bare-eyed (*K. symnopsis*), and Roseate (*K. roseicapillus*) are all housed together in a large aviary together with a single example of the Long-billed (*K. tenuirostris*), and the Western Long-billed (*K. t. pastinator*), the latter being more like the Bare-eyed, only somewhat larger and with a longer bill. The only non-Australian Cockatoo exhibited at present is the Great White Cockatoo (*K. alba*), of which there are five examples. The Cockatiel (*Leptolophus hollandicus*) is represented by a small flock which breed freely.

(d) THE PSITTACIDÆ

Six species of Macaws are exhibited. They are as follows : Two perfect examples of the Hyacinthine Macaw (*Anodorhynchus hyacinthinus*) ; two fine Blue and Yellow Macaws (*Ara ararauna*), one only recently acquired, the other a very old inhabitant ; six or seven of the commonest species ; the Red and Blue (*A. macao*) ; a single Red and Green (*A. chloroptera*), the survivor of a pair which made several unsuccessful attempts at breeding ; three Military Macaws (*A. militaris*) ; and a pair of the little Illiger's (*A. maracana*) which have laid frequently but the eggs have invariably been infertile. The Conures are represented by the Green (*Aratinga leucophthalma*), of which a pair have been in the Gardens for a good many years and last year succeeded in rearing a single young one, believed to be the first recorded breeding, several each of the Aztec and Mexican Conures (*Conurus aztec* and *holochlorus*) recently received, and a single Cactus (*C. cactorum*).

Of the Amazons, there are a number of Levallants (*A. levallanti*), one or two of both the Blue-fronted Yellow-naped (*A. æstiva* and *europalliata*), and a recently acquired pair identified as the Yellow-cheeked Amazon (*A. autumnalis*), one of which exhibits marked lutinistic tendencies. African species exhibited are a pair of Grey Parrots (*Psittacus erithacus*), a single Senegal Parrot (*Poicephalus senegalus*), and seven species of Lovebird, viz. the Nyassa (*Agapornis lilianæ*), Black-cheeked (*A. nigrigenis*), Fischer's (*A. fischeri*), Masked (*A. personata*), Peach-faced (*A. roseicollis*), Madagascar (*A. cana*), and Red-faced (*A. pullaria*). The first five mentioned all breed freely. The Asiatic Parrakeets shown are three in number, namely the Alexandrine (*Psittacula nipalensis*), and Ring-necked (*P. torquata*) and Javan (*P. alexandri*), all of which breed freely ; that of the last named is thought to be the first recorded breeding in captivity. Coming now to the Australian species, the first group comprises the three beautiful birds belonging to the genus *Polytelis*. Of the first of these, Barraband's Parrakeet (*P. barrabandi*), about a dozen examples are shown, but so far they have not reproduced. The second, the Rock Peplar Parrakeet (*P. anthopeplus*) is a fairly common bird in South Australia and several specimens are exhibited. Of the third, Queen Alexandra's Parrakeet (*P. alexandræ*), there

are at present about twenty examples in the Gardens, no less than sixteen having been reared from three breeding pairs last season, and thirteen from two pairs in the previous season.

About five pairs of the King Parrakeet (*Aprosmictus scapularis*) are on exhibition. One pair nested last season but failed to rear their young.

Two fine pairs of the Crimson-winged Parrakeet (*Aprosmictus erythropterus*) are always much admired. One pair which have been in the Zoo for many years reared a single young one last year, the first occasion on which they have nested, the second pair, recently acquired, nested in captivity a few seasons ago. One pair of the Red-sided Eeclctus (*Lorius pectoralis*) show indications of going to nest at the present time, they are probably the New Guinea race. The other New Guinea bird which has been discovered in Northern Australia fairly recently, the Red-cheeked Parrot (*Geoffroyus geoffroyi*), has never been exhibited. A single Shining Parrakeet (*Pyrrhulopsis splendens*) was exhibited during the year. It was a very old bird and did not survive very long.

Turning now to the Broad-tailed Parrakeets, several examples of all the eight species of Rosella are exhibited, namely the Crimson or Pennants (*Platycercus elegans*), the Adelaide (*P. adalaidæ*), the Yellow or Yellow-rumped (*P. flaveolus*), the Green or Yellow-bellied (*P. calodonicus*), the Pale-headed or Mealy (*P. adscitus*), the Northern or Brown's (*P. venustus*), the Eastern (*P. eximius*), and the Western or Stanley (*P. icterotis*). Most of these birds are common and no particular effort has been made to breed from them with the exception of Brown's, of which there are two pairs. The eggs from one of these have always been infertile, while the second pair, recently acquired, hatched but failed to rear their young. All the Rosellas are hardy birds with the exception of the Mealy which is difficult to acclimatize in the southern states. There are about a dozen specimens of the rare Pileated or Red-capped Parrakeet (*Porpureicephalus spurius*), a near ally of the Rosellas, in excellent condition and one pair at the present time show every indication of going to nest.

The Australian Ring-necked Parrakeets (*Barnardius*) are with one exception common birds and at present one pair of the Mallee or

Barnard's (*B. barnardi*), the Port Lincoln or Bauer's (*B. zonarius*), and the Yellow-naped or Twenty-eight (*B. semitorquatus*) are shown. The exception is the Cloncurry (*B. macgillivrayi*) which has never been exhibited but which it is hoped will be obtained shortly. Of the lesser broadtails, the Blue Bonnet (*Psephotus hæmatogaster*) is always represented by a few specimens of the common yellow-vented variety, and there is an attractive pair of the rare Little Blue Bonnet or Naretha Parrakeet (*P. narethæ*) which has only been known in captivity for the past two years and has probably not been seen alive in Europe. The common Many-coloured and Red-rumped Parrakeets (*P. varius* and *hæmatonotus*) are always on exhibition, the former occasionally breeding when given suitable accommodation in which to do so. The Hooded Parrakeet (*P. dissimilis*) is represented by a pair in fine condition and has been bred frequently in recent years, but its near allies, the Golden-shouldered (*P. chrysoterygius*) and the supposedly nearly extinct Paradise (*P. pulcherimmus*), are not and probably never have been exhibited.

Coming now to the attractive little Grass Parrakeets we find all seven known species exhibited, probably for the only time in any collection, private or public, in the world. The Bourke Grass Parrakeet (*Neophema bourki*) breeds very freely and there are usually at least a dozen specimens on view. The Blue-winged (*N. chrysostoma*) at present represented by a small flock of about twenty, has been bred on several occasions, and like all members of the genus, is always in demand for purposes of exchange. The Elegant (*N. elegans*), probably the commonest species in this State, also breeds regularly and there are well over a dozen specimens exhibited at present. The Rock (*N. petrophila*) has never been bred in the Gardens, although eggs were laid last year. It is the least brilliantly attired of this interesting group, and is at present represented by some half-dozen birds. The Orange-bellied (*N. chrysogastra*) is easily the rarest member of the genus. An adult male was obtained from Tasmania last year, but unfortunately did not survive long and just recently three more immature birds have been obtained. The Turquoise (*N. pulchella*) is the only member of the genus which does not occur in South Australia and is represented at present by a single pair. Strangely enough, this usually prolific

species has not very often been bred in the Gardens. The very beautiful Scarlet-chested (*N. splendida*) has been a very prolific breeder in recent seasons and four or five breeding pairs are on exhibition as well as a good many of their progeny.

The Pacific Island Parrakeets on view are two male Norfolk Island (*Cyanorhampus cooki*). For a short time a pair of Yellow-fronted New Zealands (*C. auriceps*) were on view, but unfortunately they did not survive long. A pair of the very unusual looking and rare Uvean Parrakeets (*Nymphicus uvaensis*) have just lately been acquired. The Swift Parrakeet (*Lathamus discolor*), that queer brush-tongued, honey feeding bird which is, nevertheless, said not to be a Lorikeet, is only represented by a single specimen. The ubiquitous Budgerigar (*Melopsittacus undulatus*) is, of course, represented, as also are several of the common colour varieties.

Last, but not least, is the rarest Parrot in the collection, a single example of the Ground Parrakeet (*Pezoporus wallicus*) obtained nearly a year ago by exchange. It is in excellent condition and quite tame ; though often stated not to have the power of either perching or climbing, this bird has frequently been seen to climb several feet from the ground and perch in a small bush growing in its enclosure. It is much to be hoped that a mate can be procured for it. Its nearest ally, the Night Parrakeet (*Geopsittacus occidentalis*) is considered by many to be extinct.

E. and F.—The Opopsittidæ (Fig Parrots) and Stringopidæ (Owl Parrots) are not represented in the collection.

BREEDING RESULTS OF 1938

By THE MARQUESS OF TAVISTOCK

Unless visited by some quite abnormal catastrophe, the owner of a large collection of Parrakeets, if he manages his stock properly, should never experience a really bad season ; on the other hand X, the evil spirit who specializes in blasting the hopes of aviculturalists, will take good care to make sure that he never has as good a one as he hopes for ! On the whole, however, in spite of X being in his usual form,

the breeding season of 1938 has been above, rather than below, the average.

The earliest young birds to be reared were a couple of Tahiti Blue Lories, which left the nest about the middle of March, their parents having reared another youngster which had been fledged about mid-winter. In spite of my efforts to prevent them, the old birds unwisely insisted in laying a third clutch, which, however, proved infertile.

Solitary Lories also nested early in the year, their grandfather-clock nesting being, of course, in the heated shelter. They hatched a young one about 14th March, but killed it almost immediately, going to nest again a few days later. Another young one was observed to be in the nest about 20th April, and for a considerable time all went well, until X, irritated by the prospect of success with this rare species, invented a horrible parasitic mite of the genus *Hypoaspis*, of a species new to Science, which attacked the poor little Lory when it was just feathering nicely and so weakened its constitution that it succumbed on the 16th of May.

The very rare Goupil's Lories made three attempts at breeding during the year, all of which unfortunately proved unsuccessful. The hen is readier to go to nest than any Parrot-like bird I have ever owned. One has only got to put the box into the aviary shelter at any time of year, and she rushes into it and attempts to lay within a few days. Unfortunately her success is not equal to her zeal, possibly owing to the fact that her constitution was seriously undermined before I discovered the correct food for the species.

She produced one egg in May, which she and her mate incubated assiduously, but although fertile, unfortunately it did not hatch. The greater part of the incubation was performed by the hen, the cock sitting occasionally but not as long or as much as the cock *C. peruvianus*. Later in the summer she made another attempt, but became egg-bound and had to be removed to the hospital. The egg was, however, laid successfully and she took to it when returned to the aviary. It was again fertile, but was unfortunately slightly damaged during incubation, with the result that the embryo was destroyed. In early autumn she made a third attempt, but this time produced a misshapen soft-shelled egg, which made her ill for a time. I therefore determined to

stop her from making any more attempts at breeding before 1939, but in order to do so was obliged to separate her from her mate, as otherwise she would undoubtedly have tried to lay again, even though deprived both of nest-box and roosting-box.

Hen Blue Lories are rather liable to suffer from egg-laying troubles, and require a high temperature in their aviary shelter when laying, combined with ample facilities for exercise in the fresh air, and a course of lime-water in their food for some time before the nests are put in.

The Palm Cockatoos came into breeding condition in March, and for a time raised my hopes greatly. Both cock and hen went into a natural hollow tree-trunk in the aviary flight, paired, and appeared to be on the point of laying. When all seemed to be going well, however, I went out one morning to discover that they had had a violent disagreement and the cock was attacking the hen angrily, and refusing to allow her on the perches at all. After a time they became reconciled, but there was a further disagreement of the same kind a few days later. This was followed by another reconciliation, after which they appeared to take to a log in the aviary shelter and to be sitting, as they took turns in being inside. When, however, we examined the log after some weeks had passed, we discovered nothing in it at all, and the cock's curious behaviour was then explained. His wife had forgotten to lay any eggs, and he was naturally incensed at the serious omission, and was only with difficulty persuaded to embark on the thankless task of incubating the abstract idea of eggs which weren't there! Always a strange and quaint bird, the Palm Cockatoo is certainly at its oddest when love-making, the advances of the two sexes to each other being most amusing to watch. Out of the breeding season, a pair are not on particularly affectionate terms, and the hen is apt to be rather afraid of the cock, and to keep out of his way. When they are thinking of nesting, however, all this is changed, and she becomes very demonstrative, tickling his face with the long feathers of her crest in order to induce him to preen the back of her head. As this hen disappointed me in a similar way last year, I have decided to get rid of her and have replaced her by another who, I hope, will be less forgetful in the matter of eggs!

My old hen Banksian Cockatoo, as she often does, laid on the floor

of the aviary shelter late in the year, and incubated the egg which, as usual, proved infertile. It is doubtful if she paired with the cock, who is a comparatively new arrival.

The Leadbeater's Cockatoos, which reared two good young ones in 1936 and two rickety young in 1937, this season murdered their young ones when they were a few weeks old, a vice, I understand, not uncommon in captive Leadbeaters. Being disgusted with their bad behaviour, I decided to train them as liberty birds, and so far they are staying well. The cock had always flown in a slightly lopsided manner, but it was only when I released him that I realized that he was partly pinioned. However, though his wings are very decidedly uneven, he seems able to get about well enough, and the pair look very lovely in flight. Unfortunately, my appreciation of their appearance was not shared by the other inmates of the aviaries, all of whom, from the biggest to the smallest, were absolutely terrified of them, and convinced that they were birds of prey of the most bloodthirsty description! That the Asiatic Parrakeets should have been alarmed was perhaps excusable, but the Australians were every bit as bad, even though the wild-bred ones must have seen Cockatoos by the hundred in their native land. This curious weakness in the ornithology of Australian Parrakeets I observed many years ago when I had a Banksian Cockatoo at liberty, of whose appearance in the air they also were extremely terrified.

Roseate Cockatoos did not do well. A grey hen, paired to her white-bred son, had young which only lived a few days, possibly owing to the parents being too nearly related. The white pair appeared to be about to nest in a grandfather-clock box, but at the last moment the hen took a dislike to it, perhaps because it contained too thin a layer of rotten wood above the peat, and dropped her eggs from the perch in the aviary shelter. A white-bred hen which laid last year did not take any interest in her nest this season, the reason, I think, being that she had no proper mate. There was a white bird in the same aviary, but it is a rather curious creature, and I have never been able to be quite sure of its sex, nor do I believe it knows itself!

Gang-gang Cockatoos, as described in another article, nested successfully, and reared two young. Unfortunately the young hen,

a few days after leaving the nest, received, during the night, mysterious and severe injuries, and although she recovered, she will never be able to fly.

Broad-tailed Parrakeets on the whole did well. My old pair of Yellow-mantled Parrakeets reared nine young in two broods.

The old hen Mealy duplicated, on a slightly extended scale, her rather remarkable performance of last year. She laid six eggs on alternate days, starting to sit almost with the first, and then getting egg-bound with the seventh. On being returned to the aviary, she was a very long time settling down, and did not begin to sit until more than ten days were past. However, she hatched six eggs and reared six healthy young ones, the seventh egg disappearing.

Her daughter of 1937, mated to an imported cock, also put up a very fine record for a young bird, rearing nine young in two broods, all as strong and well grown as could be desired.

Stanley Parrakeets which lost their young in the nest last year successfully reared four this season, although two succumbed later to ailments of microbic origin, which always seem to carry off a certain percentage of one's immature Broadtails, no matter how carefully they are housed and treated.

Tasmanian Yellow-bellied Parrakeets reared nine in one brood, the largest number of young Broadtails I have ever had from the same nest.

Yellow-rumped Parrakeets, which bred successfully in 1935, proved a failure, as they did last year. The hen was a very long time in taking to a nest, although the cock used both persuasion and force in trying to induce her to do so. On one occasion, when she had been messing about for an inordinate length of time, half in and half out of the nest-box, he lost all patience, and made one dive at her to inflict a bite on the rear portion of her person! Eventually, when the summer was well advanced, she began to behave as though she had laid, and my aviary attendant even thought that later he heard young, but when we came to examine the nest, there was no sign of anything, so that what happened remains somewhat of a mystery.

The two pairs of Blue-bonnets did nothing, although both hens entered the nest occasionally, and one pair looked decidedly hopeful,

the cock driving the hen about a lot in the way they do when they mean real business. It is possible that the nest-boxes were too big, as Blue-bonnets prefer their breeding accommodation to be very much on the small side.

The pair of Barnard's Parrakeets, imported last year, never properly settled down, or took to a nest, and finally dropped into moult. The remaining pair reared three nice young ones.

Brown's Parrakeets nested rather early in the year, and the hen hatched one of the three eggs laid, and reared a nice young cock. She nested again after an interval of several weeks, and hatched another strong young one, but allowed it to die through giving up brooding it too soon. She herself was bred on the Continent a few years ago.

Rock Peplar Parrakeets came into breeding condition early in the year, and although for a long time the hen seemed very discontented with the natural tree-trunk with which I provided her, she eventually condescended to make the best of a bad job, and three strong young ones were reared.

Barrabands proved a disappointment. The hen of one pair, purchased from an English dealer during the winter, had looked a little bit doubtful about the eyes from the time of her arrival, but it was only in May when she should have been coming into breeding condition, that she developed definite eye-disease. She is still alive, but her case has proved a very intractable one, and has entirely failed to respond to the perchloride of mercury treatment which is often successful in curing this troublesome ailment.

The other pair of Barrabands also proved a disappointment, for the cock, although a breeding bird in former seasons, and apparently much attached to the hen, persistently refused to pair with her, and the four eggs were infertile. I tried her with another cock, but she did not nest again.

Late in the summer I obtained an imported pair of Princess of Wales' which, as this species not infrequently does, came into breeding condition almost immediately after arrival. The hen laid a large number of eggs, both in a nest in the flight and on the floor of the aviary shelter, but proved completely hopeless as a parent, and broke nearly all of them. Owing to the season of the year, no

satisfactory foster-parents were available for the few eggs I managed to rescue intact. In these days of constant disappointments, with, presumably, "rogue" stock discarded from Australian aviaries, one longs for the Princess of Wales' of pre-War days—lovely big birds of a brilliantly coloured race, now seldom or never imported, the hens of which, at any rate, had *some* idea of the correct way of discharging their family responsibilities!

The hen of my old pair of Crimson-wings, now, I fear, past her best by reason of advancing years, laid but a single egg from which a good young bird was reared. Feeling that this solitary effort was a somewhat meagre one, she laid again, but did not sit the full period. I have never known Crimson-wings to do any good with the second nest. There is always disaster, either to the eggs, young, or to the hen herself, and it is wiser not to allow more than one attempt at breeding to be made, unless, of course, the first lot of eggs is accidentally destroyed. It is rather interesting to note that a young bird bred from this pair in 1937 has assumed practically full adult male plumage with his first moult.

Another pair of Crimson-wings, the hen of which was bred by Mr. Ezra, reared two good young ones, and might have done even better had the hen not laid one egg from the perch in the aviary shelter.

Pennant's repeated their good performance of last year, and reared six nice young ones, somewhat early in the season for this late-nesting species.

Adelaide's did not settle down properly or get beyond a casual examination of their nest-box. Although themselves bred in my collection, they are the wildest and most intractable birds I possess.

The breeding pair of Australian Kings reared four good young, and the hen nested again, but did not hatch. The young of the first brood showed very decided individual differences in their nesting plumage, and one has traces of a pale green wing-bar, as has his mother who, for one of her sex, shows, indeed, a remarkably well-developed one. Many of the Australian Parrakeets seem to be in the middle of interesting stages of evolutionary development and, as a result, show far more individual variation than is common in wild birds of the same age, sex, and species. Pennant's are reaching the final stage in bright-

colour evolution and soon, as one may use the term "soon" when speaking of the normally age-long process of natural change and development, will have, at all ages, the brilliant plumage of the adult male. Crimson-wings are beginning to hasten their slow attainment of adult coloration, and female and immature male King's are beginning to progress towards the assumption of the colour and markings of the adult male.

The hen of another pair of King's laid about a dozen eggs, but was a long time in starting to sit, and also broke some of them. The remainder proved addled.

The hen Green-winged King, imported the previous year, took some interest in her nest, but got no further, mainly, I think, because the cock, although the only adult male in my collection, was not as much in breeding condition as he might have been.

Owing to the loss of a breeding cock, and some mistakes in sexing a species which is less easy to sex than I at one time thought, I started the season with a considerable excess of hen Swifts—four and only one cock, a young bird of the previous year. As Swifts are said to be not averse to bigamy, I tried the experiment of two mates for the youngster, with considerable success. Although, when his first choice was going to nest, he made some show of regard for the laws of propriety by a mild bullying of the second hen, as soon as his first wife was sitting, he quickly responded to the advances of the second, and two and three young, respectively, were reared from the two nests. I obtained the loan of a second cock, but only one of the two other hens nested, and her eggs were clear.

The breeding pair of Malabars hatched and reared three good young, but after that my luck deserted me, and I lost one of the young ones and the old hen as well.

The second pair had infertile eggs.

Of two pairs of Lutinistic Plum-heads, one came into breeding condition, but did not lay owing, I think, to my failure to provide the hen soon enough with a nest which entirely suited her fancy. The other hen ignored the proper portion of her hollow tree-trunk, and scooped out for herself a rather exposed nest quite low down. In this she reared three young, one strong, one very slightly rickety,

and one more seriously affected with rickets, which could not fly for a considerable time, although now it flies strongly.

Derbyans, as last year, reared three good young ones.

The breeding pair of Layards also produced three young ones, two of them good and one, though not rickety in the ordinary way, at first somewhat defective. It was a very long time leaving the nest, and when it did so, had difficulty in perching, although it could fly strongly. Oddly enough, it was its parents' favourite, and they rather neglected their more healthy offspring in its favour. I eventually gave it to the wife of my aviary attendant, under whose care it thrived, and it has become a great pet and is learning to talk.

The second pair of Layard's hatched one young one in their first nest, but lost it almost immediately. They laid again and, in spite of being in heavy moult, had hatched and nearly reared three young ones, when I let out the Leadbeater's Cockatoos above alluded to. On the appearance of these frightful apparitions, they promptly gave up feeding, and immured themselves permanently in the aviary shelter, and we were obliged to finish hand-rearing their offspring. Although in this we were ultimately successful, they proved considerably more troublesome than I anticipated, being strangely nervous and temperamental, even after fairly prolonged caging and handling.

Splendid Grass Parrakeets, as recorded in another article, did extremely well, rearing five good young in their first nest, and eight in their second, and showing considerable disappointment at being prevented from undertaking yet a third venture!

Turquoisines made an equally promising start, but ended less happily. Six good young were reared in their first brood, but when the second brood of five were barely half-grown, the hen suddenly died. As the cock would not feed them by himself, we had to hand-rear them, and for a time they did well on a somewhat unnatural mixture consisting of raw egg and milk, bread, finely chewed shelled peanuts, crushed soaked hemp, crushed groundsel, and finely chewed-up wheat, given very warm and presented on the end of a paint-brush. For a considerable time all five nestlings grew and thrived, and the three eldest were reared and have made fine birds. The two younger ones, when well feathered and apparently also safe, rather mysteriously

started to go back, and eventually died, from what cause it is rather difficult to know.

A green hen Ringneck, paired to a young lutino-bred cock, failed to hatch her first clutch of eggs, but produced two young in a second clutch, which later she killed, probably owing to being subjected to a good deal of unavoidable disturbance which birds of the Ringneck family are very apt to refuse to tolerate.

My best lutino-bred cock, paired to a lutino hen, produced a very creditable brood of five—three lutinos and two greens.

The lutino mother of the above cock, paired to a young lutino-bred male, had two lutinos and a green, but her mate, after this happy result, disgraced himself by suddenly attacking her for no apparent reason, and very nearly murdering her. Another lutino hen, sister of the above, paired to a lutino-bred cock, reared two greens, the result from the three nests thus working out, as regards colour, on an exact fifty-fifty basis—five lutinos and five greens.

NOTES FROM AUSTRALIA

By SYDNEY PORTER

(Concluded)

What a thrill it was after only three days in Australia to see my first wild Gang-gangs as they flew screeching over a forested gully; the hen stayed for a time on the topmost branches of a mighty gum tree. I could tell it was the female for I noticed through my glasses her grey head.

Afterwards when I stayed at the house in the forest these birds woke me up each morning as they flew from their roosting places. In fact this was the first bird sound to be heard in the mornings; the noise is like that made by a cork when it is difficult to draw it out of a bottle, but a hundred times louder.

The Gang-gang is not rare in certain spots and is confined to the heavily forested and mountainous country in the south-east of Australia. It is rarely seen in captivity and I only saw about five birds in private

hands. It is very difficult to obtain, as it frequents the tops of the high forest trees and is strictly protected. Upon the rare occasions when one does meet with the bird in captivity it has been taken from the nest and hand-reared.

The flight of the Gang-gang is wonderfully light and buoyant, the birds seeming to float in the air, there is none of that hard swift flight which most Parrots possess.

I was told that some months before I arrived there was a flock of about fifty of these birds around the house feeding upon certain wattle seeds (*Falcifermis*) and the seeds of the great forest eucalyptus, *E. regnans*. I often used to watch the birds feeding in the gum trees in a forested gully. They usually seemed to be in pairs or small parties; these were no doubt the pair and young ones. When feeding in the trees the birds are remarkably hard to distinguish; the plumage, especially that of the female, harmonizing perfectly with the greyish green foliage of the tall gum trees; the cock's body seemed invisible, but the bright scarlet head and upstanding crest looked like some brilliant blossom against the sombre foliage.

The Gang-gang seems never to trespass in the fruit gardens or to partake of any cultivated fruits. It is a bird exclusively of the high mountain forests and subsists on its products. It does not appear to be shot or persecuted in any way and seems to have few natural enemies except the forest fires which destroy the nestlings and also its food. I heard of a pair for sale in Sydney but was unable to trace them. I had always imagined Pennant's Parrakeets to be inhabitants of Australia's sparsely timbered plains, like so many of that country's psittacian forms, I don't know why I did; but I was surprised to find it, at least where I stayed, inhabiting the deep vast forests on the mountains of Victoria. How splendid they looked when I first caught sight of them flying through a cutting in the forest, their brilliant crimson and pale violet making a vivid contrast against the sombre greenery of the undergrowth.

As I write these notes, sitting in the heart of a deep forest beneath a green roof of exquisite fan-vaulting made by the masses of tree ferns, a pair of these gorgeous birds are feeding on the pungent green seeds of a highly aromatic forest shrub called *Zieria smithii*. The birds are

quite unafraid. Why should they be anything else, this is a sanctuary for Australia's much persecuted Parrot life. The birds slowly climb about, pulling the branches towards them with their feet, biting off the bunches of seeds and holding them in their feet until the spray is finished ; during the time keeping up a kind of conversation with each other with a soft " whit-whit ".

As I shave in the mornings in the bathroom I watch in the branches of a rowan tree, which almost reaches into the room through the open window, family parties of these Parrakeets feeding on the scarlet berries ; in fact it is the only time shaving becomes a pleasure for it serves as an excuse to linger long, looking at these beautiful birds. So long did this operation take that I was always late for meals and it was a good thing that I was the only male member of the household.

The birds I am watching in the forest are only about three yards away and I could almost touch them ; they are not alert or watchful or ready for instant flight as one would expect them to be, but they go on feeding as though I were not there. The mosquitos and leeches make sitting still a matter of great fortitude, so it is I and not the birds that will soon have to take flight.

There are a lot of young ones in the trees around the house and they are in the undress plumage of mottled green and crimson, and even though they feed with as much gusto as their parents they are always keeping up a continual whining to be fed. These young birds are more or less uniform green on the wings and body, with a patch of blue on the chin and surrounding the lower mandible ; the forehead, upper breast, throat, and the part surrounding the blue patch are crimson. I have seen some very mottled birds, almost red but with green patches on the wings and breast ; I think these must have been in their second year. Sometimes I have noticed young ones, from the rear, and I have been struck by the resemblance to a Norfolk Island Parrakeet, a uniform grass green with a red cap. It is not to be wondered at that the inhabitants of Norfolk Island where these two Parrakeets are found, think that they interbreed and that the mottled young ones are the progeny of these two birds.

Sometimes as I lie in a hammock beneath one of the large trees I am continually showered with the scarlet skins of the rowan berries

as the birds feed. It is surprising what acid and extremely astringent fruits Parrots will eat. Rowan berries are especially bitter and astringent but they are greatly relished by the birds.

Unfortunately these lovely Parrakeets are considered a pest for the damage they do to the fruit crops, especially apples, and are shot at every opportunity by the farmers and the fruit growers. In some districts they are shot and made into pies. At the house where I am staying the birds even come into the horse's manger and eat the corn, and one day, says the owner, she'll have to shoot them. So tame and plentiful are the birds in the timbered districts that they are found in dozens around the timber-felling camps, and in the winter when food is short the birds feed from the horses' mangers, getting so tame that the birds and horses feed together. Of all the Parrakeets which I saw wild in Australia I think this one the most beautiful. Its habitat seems to enhance its beauty, for it lives mainly in the shady groves and deep forests where its brilliant plumage makes a startling contrast to the sombre greenery.

Another gorgeous bird was the King Parrakeet, which was fairly plentiful around the house in the forest. They were the first Parrakeets I saw there, but they were not nearly as numerous or as familiar as the foregoing bird, which stayed around the house all day. How lovely they looked against the dark greenery of the forest trees. They were a great menace to the fruit and devoured all and sundry, but what amazed me was their predilection for potatoes. It was impossible to dig these up and leave them while one went for a meal, for the birds were sure to find them and not being content with one or two would bite up the whole lot; they are also one of the few birds which will eat tomatoes, and they do a great deal of damage where these are grown. They prove a pest in the fruit-growing districts, eating the unripe apples and pears; they are also very fond of the sweet or Spanish chestnut.

These birds, like the last-mentioned species, look very lovely when flying through the forests, but they do not seem to come down as low as the Pennants. The light green wing coverts always look particularly brilliant when the birds are in flight. There were a lot in captivity in the Colin McKenzie Reserve at Healsville. They were in a large

aviary, but seemed very neglected and some had bad eye trouble. There were a few wild ones outside the aviary trying to get inside, either to reach the food or to be with their mates, as the birds had all been trapped in the vicinity.

I watched a family party one morning, they were in the tops of the giant gum trees and I had almost to lie on my back to watch them through my binoculars. There was the old pair and a pair of young ones, these latter persistently chased their parents round the whole time uttering a loud querulous cry. They seemed insatiable, no matter how much they were fed they cried for more. Each parent seemed to take charge of one youngster. Often the male would feed his charge, quite a lengthy process, and he would endeavour to rest awhile, but the youngster would wag his head crying for more only a few inches from his parent's beak. The cock stood it for a while in stony silence, and then let out the most ear-piercing shriek as though telling his progeny to "shut up". After a time he flew off to another tree, but the youngster followed him only a few inches behind his tail, still clamouring for food.

The beautiful Blue Bonnets seem almost unknown at the present time in captivity in Europe. I cannot quite understand this as they were frequently imported and kept by aviculturists in pre-War days. I wonder if we have lost the art of feeding them. That they are difficult birds I know from sad experience ; it seems almost impossible to keep them these days unless they are hand-reared, but when they are they prove to be long-lived and most delightful birds as pets. Mr. Wadell, of Melbourne, had three hand-reared specimens in his aviaries and they were quite the most delightfully tame birds I have ever seen. As soon as one appeared the birds literally threw themselves at the wire netting demanding to be taken notice of, and as soon as one was in the aviary they were all over one, racing round one's shoulders or running up and down one's arm with head feathers erect and all the time chortling their little warbling song and displaying their exquisite turquoise blue shoulders. They were some of the few birds I have ever seen which didn't mind one holding them in the hand, in fact they almost reminded one of puppies in their delight at being played with. It is only when tame that their chief beauty is shown, i.e. their beautiful waxy blue

wings. The trouble is that no one who has hand-reared these birds ever wants to part with them. But a friend in South Australia has promised to hand-rear me some this next summer and I hope to pick them up when I visit Australia again, which I hope to do at the end of this year.

On the first day I landed in Australia I saw six fine Blue Bonnets in a bird shop in Melbourne, and knowing that opportunities seldom come twice, I secured the lot. I was glad I did at the time, for I saw no more offered for sale whilst in Australia. The birds were supposed to be aviary-moulted specimens, but I rather doubt it, though they were in perfect feather and quite tame. The dealer kept them for a time until I went to Adelaide, when Mr. Harvey kindly let me have them at his place, but he warned me that it was almost impossible to keep wild caught ones alive. Before I left Adelaide one hen was so ill that I left her ; later on in Sydney two cocks died, after that I used to give seed which had been soaked in cod-liver oil for 48 hours ; this seemed to revive the other three and they lived for almost two months in New Zealand, then they went. The birds seemed in perfect condition—fat, lively, and in perfectly normal condition—then one morning one finds them with their head feathers erected and looking rather “ puffy ” about the head ; their droppings become a peculiar yellow colour and look like custard, the bird goes thin very quickly, and in a week it is all over, the bird by that time being almost a skeleton. I cannot understand it unless it is that the bird needs some kind of food which we do not know of. Maybe they are like some of the Australian marsupials which seem to need special kinds of food at certain times of the year when they (the foods) generate certain chemicals which are necessary to the animal's welfare. It was a great disappointment as they were such fine specimens.

The first wild Blue Bonnets I saw were at Lagoon Sheep Station in the east central districts of South Australia. Here I found them quite common, being most numerous around the homestead where they seemed to congregate in small flocks or family parties of from four to ten. They spent a good deal of their time on the ground, searching no doubt for small seeds, and when disturbed flew into a nearby tree. If disturbed again they always flew away in pairs. The cock's tail when

he flew away was noticeably convex. The birds were not at all timid and allowed an approach to within a few yards of where they were sitting. Their voices were not loud or harsh and their usual call was like the distant squeaking of a rusty hinge. There are three species of Blue Bonnets, though some ornithologists maintain that there are only two; they state that the Yellow-vented and Red-vented are one and the same, and they state that the red under-tail coverts are only a matter of age; they bring out a long series of skins to show how the birds graduate from the yellow to the red. I think, and other aviculturists in Australia also, that there are two species which gradually merge into one another. The Yellow-vented form is found in South and South-Eastern Australia and this merges into the Red-vented form which is found in Northern New South Wales and South Queensland. Dr. Lendon had the three forms in his aviaries in Adelaide; the Yellow-vents are quite distinct from the Red-vents, and this is not a matter of age. The third species, the Naretha, is quite distinct from the other two, and besides a difference in plumage is much smaller.

BREEDING THE MAGPIE TANAGER

By F. E. THOMAS

It may be amusing to your readers to know of one fairly enthusiastic aviculturist, who fell into the hobby quite by accident, who now has about 250 birds, and who now has achieved—he hopes—an avicultural success also by accident.

The desire and wish for the hobby arose some years ago, after considerable thought as to the most advantageous manner in which I might utilize a well-built and quite substantial little house in my garden, which had been left to the tender mercy of the gardener and used for no other purpose than that of storing tools; surely some better use might be made of this little structure with cemented floor and well match-boarded throughout, strong enough in the event of another

crisis to stand up even better than the present-day bungalow, and so at last—why not an aviary? How thrilling to keep exotic birds, particularly those with long tails!

On completion of the aviary, I journeyed to a famous London bird shop and here I must pay tribute to a most sensible and very excellent salesman, who simply told me “not to be too ambitious at the start”, and insisted on my commencing with just a dozen Waxbills and six Finches. That I am grateful for his advice, I frankly admit, but within forty-eight hours I had lost all my birds; not that the sleeping quarters had let me down, but the flight, where I had foolishly “planted” artificial trees, and consequently my first venture was a complete fiasco. The post-mortem disclosed arsenical poisoning, so out came the manufactured trees. Having learnt my lesson and with that characteristic which is possibly peculiar to my race, I again visited the bird shop and needless to say still make further calls to this and other bird shops, which has resulted, so my friends tell me, in my having a fair collection, ranging as they do from Argus Pheasants to Zosterops.

My aviaries might be called large, and as their occupants in every case are “gentlemen only”, peace reigns supreme with Pheasants and birds. I decided at this stage not to attempt breeding, as the aviaries were considered unsuitable, and instead stocked them entirely with male birds whom nature has so gloriously and richly endowed. It is an endless pleasure for me to behold such a galaxy of colour, where are housed together (and I emphasize living quite happily) Touracous, Golden Orioles, various Tanagers including Scarlets, Troupials, Hang-nests, Giant Whydahs, Fruit Suckers, Pittas, etc.

Not infrequently I am asked why I do not show my birds, and whilst I am not anxious to cross swords with my friends in the “fancy”, I do feel they impose an almost impossible condition at their shows by insisting that a bird’s chief merit lies in complete steadiness, which in my opinion can only be obtained by continual confinement in cages, whilst an enthusiast like myself keeps his birds in spacious surroundings, and I for one find it utterly impossible to comply with such a ruling. It is interesting to recall how a few years ago, whilst on holiday, I rang up an eminently successful lady exhibitor, being naturally anxious

to view her collection, although as a showman I was unknown to her, but with the usual courtesy found with fellow aviculturists I and my family were subsequently received with the utmost cordiality and hospitality. Her collection, may I add, just served to increase the fever that by this time had gripped me strongly.

I now turn to my solitary breeding success (achieved, of course, by accident) after six years' experience of this delightful hobby. The spring of 1933 took me on a memorable visit to Clères, where I acquired among a few others a glorious Magpie Tanager, and although he had been housed in their tropical quarters, he has proved himself as hard as nails. He naturally joined the other bachelors and the tranquillity of the aviary remained undisturbed until the spring of this year when I was fortunately able to acquire another of these glorious birds. That it was a "cock" I was positive, for were they not alike as two peas, and why should I not have at least two bachelors of a kind. All went well for several weeks and if close and almost continuous observation is made of one's birds how easy is it to detect even a disturbing influence in an aviary—suddenly the old cock Tanager wages war and the Scarlet Tanager becomes his arch enemy. Fortunately no casualties occurred, but what could be the explanation of his sudden ferocity, surely the newly acquired "cock" was not to blame, but closer observation convinced me they were a pair and that they should be removed to more suitable quarters with as little delay as possible, for after all why shouldn't I have a shot at breeding.

In May they were transferred to an aviary, of which the only other occupants were a pair of docile Argus Pheasants, but here I blundered badly as this particular aviary was sadly lacking in cover, and consequently they made no attempt at nesting. The season was by this time over, and we were now in the second week of September, and so for the purpose of communal feeding they were again transferred to yet another aviary which happened to be well planted, particularly the back wall, with a mass of creeper. To my consternation one evening only one Magpie Tanager was on view, but on close examination the hen emerged from the trellis-covered wall, where we located a soundly constructed nest containing two eggs. The problem then presented itself that, provided the eggs were fertile, how were the

young to be reared, also what possible chance had they of surviving the rigours of a typical English autumn. I duly approached our good friends, the Keston Foreign Bird Farm, who offered most helpful, but by no means optimistic advice, so I just hoped for the best. The eggs were slightly smaller than those of a Thrush, light greyish colour with dark markings; period of incubation fourteen days. One bird only was hatched, 24th September, which left the nest 8th October, and is already able to fly a matter of four to five yards. The parent birds were offered a plentiful supply of fruit, gentles, insects, yolk of hard-boiled egg, and, of course, mealworms.

I have no knowledge of this specimen having bred in captivity and Keston also expressed a similar view. Need I add my Magpie Tanagers will be offered every inducement to carry on their good work again next year.

16th November, 1938.

I am very happy to state that the young Magpie Tanager is progressing quite satisfactorily. At this stage it is now almost impossible to note any real difference between "him" and his parents, except that in the case of the youngster the beak is considerably duller than that of the older bird.

21st November, 1938.

The young Magpie Tanager is still making excellent progress, and is now completely independent and almost identical with the parent birds. It was observed that the young bird on leaving the nest on 8th October, did not return, but settled down each night in the cover provided in the flight, whilst the parents took up their positions quite near him. At this period the nights were cold and very stormy, and it seemed desirable that they should now be confined to the sleeping quarters at night, and after a little persuasion we did manage to get them inside, where the youngster chose for himself the highest possible perch, and the parents were apparently content to remain just near him.

One curious point, however, was the fact that although a good supply of food was provided in the shelter, they simply touched nothing, not even mealworms, and consequently had to be let out very early

in the mornings, irrespective of the elements, when they would feed generously from their table out of doors.

I trust the foregoing may prove of some interest to other aviculturists.

THE CHANGE OF EDITORSHIP

Our members will be very grateful to Miss Chawner for the large amount of work she has done for the Society during her term of editorship and all will regret that she now finds that she must relinquish the post. Miss Chawner is one of our most experienced aviculturists who has successfully kept and bred many birds, notably Owls. During several years past she has held the important post of Curator to Mr. Spedan Lewis's fine and ever-growing collection, and under her charge this has become one of the most important private collections in Europe. We are very glad to be able to report that Miss Chawner has consented to serve on the Council, and her knowledge and experience will still be at the disposal of the Society.

To find a suitable Editor for our Magazine is no easy task, for such a post involves a knowledge of ornithology with its terms and nomenclature and also of editing scientific matter, for we would wish our Magazine to be regarded as a scientific as well as a practical journal.

The Council, with the advice of M. Delacour, has asked Miss Phyllis Barclay-Smith to undertake this task and has every confidence in its choice.

Miss Barclay-Smith is a Fellow of the Zoological Society of London and a Member of the British, Czechoslovakian, Dutch, and German Ornithologists' Unions; Corresponding Member of the Royal Hungarian Institute of Ornithology, Honorary Member of the British Falconers' Club, and Secretary of the International Committee of Bird Preservation. Further, she is Editor of *The Naturalist's Calendar* and a contributor to *Nature*, *Country Life*, *The Field*, *Discovery*, etc. She is also one of the Official Observers of birds in the Royal Parks for H.M. Office of Works, and was Secretary of the section which includes aviculture

in both the 8th and 9th International Ornithological Congresses held in Oxford and Rouen.

Miss Barclay-Smith has visited most of the European collections of birds both public and private and her knowledge of foreign languages enables her to keep in touch with aviculturists and ornithologists in all parts of the world.

It is hoped that all members will do their best to help the new Editor by sending her contributions for the Magazine. Every member who keeps birds, as well as those who make interesting observations on birds in the wild, should write an account of his or her experiences ; so please do so.

Communications for the Magazine should be sent to Miss Phyllis Barclay-Smith, Park Lodge, Hervey Road, London, S.E. 3.

D. S-S.

EXPEDITION TO THE GALAPAGOS ISLANDS

By LEE and NIGHTINGALE

Two zoologists, who with four others are to spend six months studying bird life on the lonely Galapagos Islands, off the West Coast of South America, sailed from Liverpool in the P.S.N.C. liner *Reina del Pacifico*. They were David Lambert Lack, the leader of the expedition, and Mr. Hugh Thompson. They are travelling about seven thousand miles to Ecuador in the *Reina del Pacifico*, and will cross from the mainland of South America to the Galapagos Islands, which are on the Equator, a voyage of about six hundred miles, in a small ship.

The expedition is on behalf of the London Zoological Society and the Royal Society. "We shall make our headquarters on an island called 'Indefatigable' and we shall live in tents," said Mr. Lack in an interview at Liverpool. "There are only a few people on the island, about a dozen or so of various nationalities. We shall study the habits of the living birds, and hope to be the first to bring back alive to England

birds known as Darwin's Finches. These birds, which are about the size of a Sparrow, were written about by Charles Darwin in *The Voyage of the Beagle* and the *Origin of the Species*, following a visit he paid to the islands more than a century ago. The birds present a unique biological problem, and we want to find out why they have turned into so many different kinds. Our study may help to increase our knowledge of evolution. We are taking much equipment with us, including a quantity of tinned food presented to the expedition. The four other members of the party will join us at Ecuador."

LONDON ZOO NOTES

By N. WHARTON-TIGAR

Taking a stroll round the small Bird House, looking about for something of interest to readers, especially distant ones, I bethought myself of the Tanagers. I found that there are at present few of these beautiful birds in the collection.

First to catch my eye, darting about the large middle aviary, were several very fine Superbs, *Tanagra fastuosa*, usually acknowledged to be the most lovely of all; a native of the state of Pernambuco, Brazil, where it must be plentiful indeed, since countless thousands have been shipped from there and they still appear to come over fairly often in spite of restrictions placed by Brazil on the export of birds. In this same aviary is a perfect pair of that charming little Tanager, *Nemosia pileata*, which I brought for the first time to this country in 1933. Pretty little things, blue grey above and white below, with a black hood in the cock which is absent in the hen; both sexes have a bright yellow eye. Also in this aviary is a pair of the Ornate Tanager, *Thraupis ornata*, South-East Brazil, and the well-known Scarlet Tanager, *Rhamphocelus brasilius*, and its near relative, the Maroon Tanager, *Rhamphocelus carbo*.

In one of the large cages there is a very fine pair of the Magpie Tanager, *Cissopis leveriana*, Pernambuco, Brazil, a striking black and white species with a long tail. For a number of years a grand pair of

the White-capped Tanager, *Stephanophorus diadematus*, has been a feature in another of these cages ; alas, one died this year, but I see its place is already filled by another of this species. This is a difficult bird to establish when first imported, and they look so dull giving no idea of the beauty that they afterwards attain, a lovely shining dark blue, with a white cap on which rests a tuft of red feathers. The Zoo has had since 1923 a Silent Tanager, *Arremon silens*, others of this species have come and gone but he goes on !

And lastly there is a specimen of a large Tanager, very rare and beautiful, brought over by Mr. C. S. Webb, the Scarlet-bellied, *Pæcilothraupis lunulata*, found at a height of ten to twelve thousand feet. So far this species has not proved easy to keep fit in captivity. I believe Mr. Webb is writing an article which will no doubt tell fully of the difficulties encountered in collecting these and other birds which he has recently brought over.

SIXTY-FIRST ANNUAL REPORT ROYAL ZOÖLOGICAL SOCIETY OF SOUTH AUSTRALIA INCORPORATED

In the Society's very interesting report it is stated that there are on exhibit no less than fifty of the fifty-nine species of Australian Parrots, the largest collection of these birds known to exist. The Society has the good fortune to possess one of the extremely rare Ground Parrakeets and to be able so far to keep it in good health. Three pairs of Queen Alexandra's Parrakeets have between them reared sixteen healthy young.

A photograph of the Ground Parrakeet is included in the Report.

E. F. C.

REVIEWS

THE NATURALIST'S CALENDAR. Edited by PHYLLIS BARCLAY-SMITH and RUDOLF ZIMMERMANN. M. C. Forrester, 9 Leinster Gardens, W. 2. 3s. 6d., postage 5d. extra.

The great development of photography has brought about the production of "Nature" cards and calendars of which last this is an excellent example. The photographs of birds, insects, and plants are really beautiful and the editors are to be congratulated on the wide range of subjects depicted. The descriptive account to each plate is concise and accurate with no sentimentality or "fine" writing.

The Calendar is very good value at the price charged for it and is strongly recommended to those in search of an unusual and beautiful gift.

E. F. C.

THE HANDBOOK OF BRITISH BIRDS. Vol. II (Warblers to Owls). By H. F. WITHERBY, Rev. F. C. R. JOURDAIN, NORMAN TICEHURST, BARNARD W. TUCKER. Price 21s. Published by H. F. and G. Witherby, Ltd., 326 High Holborn, London.

The second volume of this handsome "handbook" fully maintains the high standard set by the first, and the information it contains concerning the life history of British birds from Warblers to Owls is exhaustive and full of interest to all bird lovers, whether they be experts or beginners. The plates, as in vol. i, show male, female, and juvenile plumage in summer and winter, and will be particularly helpful to observers of such difficult birds to distinguish as the various Warblers. Accidental visitors are included, and the localities recorded in which they were seen and usually "procured".

The book deserves a place on every ornithologist's bookshelf; it would be invaluable in public libraries, where it could be consulted by students whose means will not allow them to buy it.

E. F. C.

CORRESPONDENCE

MADAM,—F. E. Mathew's lack of success with Shamas was probably due to interference from the cock bird. Insectivorous species which are given their liberty when young are hatched, I believe, seldom misbehave in this manner.

Where this is not practicable, and, unless one lives in the country it seldom is, the difficulty can sometimes be overcome by segregating the cock in such a position that the pair can still see each other, after the hen has commenced sitting.

The hen will then often rear the young by herself with only the cock's moral support!

D. H. S. RISDON.

130 GREEN LANE,
NORTHWOOD.

MADAM,—Your readers may be interested in the following broadcast:—

In the Hobbies series from the Midland station on 2nd December, at 8.45 p.m., Norman Dixon gives a talk on Budgerigars and Parrakeets. Mr. Dixon has several times been first prize winner in these classes at Crystal Palace. He won the Parrakeet Trophy of the National Foreign Bird League in 1937, and he was one of the founders of the Midland Budgerigar Society.

ELISE I. SPOTT.
For Press Representative.

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